

# THE SCHOOL REVIEW

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## EDUCATIONAL NEWS AND EDITORIAL COMMENT

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### FROM SCHOOL TO COLLEGE

READERS of this journal, no doubt, have been following with considerable interest the current concern over transition from school to college. The problem of articulation between high school and college is not new, of course. The Committee of Ten (1893) and the Committee on College Entrance Requirements (1899), to name only two, were appointed to deal with this question.

The Educational Records Bureau for more than a quarter of a century has concentrated attention on the problem. The Eight-Year Study, involving thirty high schools and a large number of colleges, also attacked this question. The reader will recall numerous other efforts to effect a smoother transition from high school to college.

Alvin C. Eurich, vice-president of the Fund for the Advancement of Education, considered this problem at the Seventeenth Educational Conference held last fall in New York under

the joint auspices of the Educational Records Bureau and the American Council on Education. His address is reported in the proceedings of the conference published by the American Council under the title *Modern Educational Problems*. Eurich said:

Growing out of the early recognition of the importance of the problem, of both extensive and intensive investigations, and of efforts to make the transition from school to college easier and more meaningful educationally, some progress has been made. I hasten to add, however, that the problem has by no means been solved. It remains one of the most critical and baffling problems in education.

The current renewed interest in this question has been stimulated in large part by the Fund for the Advancement of Education established by the Ford Foundation. Four projects supported by the Fund, while perhaps primarily concerned with promoting general education at this level, have been directed also at improving articulation between school and college.

The first project, the program for early admission to college, was launched in 1951, ostensibly as a pre-induction experiment. At that time it appeared that for some years ahead the education of many young men would be interrupted by the requirement of military service at, or soon after, the age of eighteen. In co-operation with four universities—Chicago, Columbia, Wisconsin, and Yale—a program was drawn up which provided for the admission to college of able young men sixteen and a half years of age or younger, most of whom would have completed only the tenth or eleventh grade in high school. The plan made it possible for able young men to complete two years of college by the age of eighteen and a half or younger. Substantial grants from the Fund to the participating colleges, including generous scholarships to the selected students, added to the attractiveness of the program. Indeed, the original announcement of the grant by the Fund aroused sufficient interest to warrant expansion of the program to include eight other colleges and universities: Fisk, Goucher, Lafayette, Louisville, Morehouse, Oberlin, Shimer, and Utah. In the two years during which the program has been in operation, 849 students, the majority of whom had completed only the tenth or eleventh grade, have been admitted to these twelve institutions.

A second project designed to attack the problem of transition from high school to college involved a joint effort by faculty members of three eastern

preparatory schools—Andover, Exeter, and Lawrenceville—and three universities which receive many of their graduates, namely, Harvard, Princeton, and Yale. This project was concerned primarily with identifying those points at which the curriculums in the two sets of institutions overlap and in devising ways of shortening the length of time required to complete a general education through closer articulation.

A joint committee of these institutions has prepared a report (*General Education in School and College*, published by Harvard University Press) in which it is recommended that for qualified students a co-ordinated seven-year program be offered as an alternative to the present four years of high school and four years of college. The recommendation is based on the conviction, growing out of an examination of the curriculums in the preparatory schools and the colleges and experiments in closer articulation, that time now wasted in both high school and college could be saved by improved programs in both and by more effective means of transition.

A third project supported by the Fund is a collaborative effort between the public school system of Portland, Oregon, and Reed College. Through the active co-operation of faculty members of Reed College and teachers in the Portland schools, a city-wide program is being designed to enrich the educational opportunities for gifted public school pupils. Ways are being sought to co-ordinate this new

program with the common curriculum of the schools in order that the essential features may be available to as large a number as possible. The project involves the development of techniques for identifying the students who would benefit most from the program, the development of appropriate curriculum materials and methods of instruction, and the designing of instruments for evaluating the results of the program. The co-operation of other colleges is being sought in a follow-up study of the students from the program and for purposes of working out closer articulation between high school and college and to explore possibilities of acceleration at either the high-school or college level or both.

A fourth project, focused on the same general ends as the others, is concerned with the development of plans whereby able students might undertake, while still in high school, courses equivalent to those now taught in the first, or even second, year of college. The plan would make it possible for the better high-school graduates to enter college with advanced standing and thus be able to complete the Bachelor's degree in less than the four years usually required. It is believed that the abler high-school students could complete a whole year of college work while still in high school if the opportunities were open to them.

In the initial stages of the inquiry into the possibility of admission to college with advanced standing, a committee of colleges (Brown, Bow-

doin, Carleton, Kenyon, M.I.T., Middlebury, Oberlin, Swarthmore, Wabash, Wesleyan, and Williams) was formed under the leadership of President Chalmers of Kenyon College. The committee later was enlarged to include twelve headmasters, principals, and superintendents. Close working relations were established with twenty-two secondary schools. Dr. William H. Cornog, on leave of absence from his post as president of Central High School in Philadelphia, is serving as executive director of the committee.

Several working committees, involving the participation of more than a hundred school and college teachers and administrators, are presently making an intensive study of eleven subject-matter fields commonly taught in college, with the view to ascertaining the extent to which high-school preparation in these areas might be enriched. Reports from these committees will be published this fall. The plan is to put the recommendations of these working committees into effect as quickly and as fully as possible. In the meantime, the central committee authorized pilot studies in seven schools and two colleges during the spring semester of 1953. These studies have attempted to identify and iron out practical operating problems.

An interim report of progress on the four projects described above was released in June by the Fund for the Advancement of Education (575 Madison Avenue, New York 22) under the

title *Bridging the Gap between School and College*. In announcing publication of this first report of progress, Clarence H. Faust, president of the Fund, said:

Leading educators have long been concerned about two closely connected defects of the American educational system which undermine quality and impose severe waste. First is the poor articulation between units of the system and the resulting lack of clarity as to each unit's function in relation to the whole. Second is the lack of sufficient flexibility to accommodate the wide differences of ability, interests, and maturity that prevail among young people of similar age. These defects, though they occur throughout the educational system, are most prominent and perhaps most serious in the four-year period comprising the eleventh through the fourteenth grades, including the troublesome transition from school to college. Their net result is a dulling of student interest in learning, a downgrading of educational results, and a waste of human resources, which are far greater today than before the turn of the century when such educators as Dewey and Eliot complained against them. With these considerations in mind, but with no preconceptions as to best solutions, the Fund for the Advancement of Education has given support to a combination of four promising experiments which attack this common problem from different directions.

The four projects are complementary, yet in some measure they also represent alternative approaches to the same goal. Their common and basic purpose is to improve the efficiency and quality of education, especially from the eleventh through the fourteenth years of schooling, both by providing a richer education during this time period and by accelerating the whole process, especially for more able students. Though their major focus is upon the better-than-average student who is perhaps the

most seriously damaged by present shortcomings, the underlying concern and ultimate objective is the improvement of education for all young people.

At the University of Chicago the problem of developing a sound program of general education in the last years of high school and the first years of college and of effecting a better transition from high school to college has been a major interest throughout its history. Indeed, this problem was given high priority in the thinking and dreams of its first president, William Rainey Harper, even before the doors of the University opened in 1892. As the whole educational world knows, former Chancellor Hutchins devoted much of his time and energy during his term of twenty-two years to the development of a program of general education. The College of the University of Chicago, embracing the last two years of high school and the first two years of college, was established to develop a program of general education and to effect a new transition from high school to college. For a period of several years the College has awarded the Bachelor's degree upon completion of the program of general education. Graduates of the College who wished to continue their studies at the University entered three-year programs leading to the Master's degree.

Readers of this journal have followed, perhaps, the press reports which have described the controversy on the campus over the relocation of the Bachelor's degree and proposals



for improving the University's relations with secondary schools and with sister-institutions of higher education. These academic debates, usually a healthy sign on any campus, have resulted in some misunderstanding and confusion in educational circles. In an effort to clarify the issues and to report accurately the changes which are being made, Chancellor Kimpton chose to discuss the problem in his convocation address to the graduating class this spring. The general national interest in the problem of transition from school to college and the University's historic role in attempting to do something about it, warrants extensive quotation from the Chancellor's address:

What I am saying to you now the University has been saying to itself all year, and today I propose to discuss the place of undergraduate education in the University of Chicago, first in terms of the knowledge we have gained about it from our past achievements and then in terms of the changes needed to incorporate it with the present and with the more visible portions of the future.

What, then, are the educational values which the College sought to realize over the past twenty years? It began upon the simple premise that there is an education that should be common to all intelligent people. If men are to communicate, they can only understand and appreciate one another's ideas against a background of common knowledge. It is this education which we call general education as opposed to that specialized training through which men develop expertness within a special field of knowledge. How can such a program of general education best be devised and taught? This was so large and important a question

that a separate faculty was established which would have as its exclusive concern the creation and teaching of a curriculum in general studies. It was to be a basic education providing a background for communication, a basis for the enrichment of personal experiences, and a foundation for good citizenship. In order to create this separate faculty and clothe it with the stature and dignity necessary for its important job, it was granted the privilege of awarding the most valued of undergraduate degrees, the Bachelor of Arts. Along with this interest in devising a program of general education went a strong interest in the problem of high-school education and its relationship to the process of higher education. Time is wasted in the Junior and Senior years of high school, and its program is unrelated to the system of higher studies beginning at the college level. These are the fundamental considerations which brought about the program which we have come to call the College of the University of Chicago. . . .

But certain problems, both practical and theoretical, developed in the actual operation of this program, and the charges that have just been made are designed to solve these problems. Let's start with the practical problems. The College began at the eleventh grade to point up dramatically the weakness of the high-school program. This move, understandably, did not generate any lively enthusiasm, to say the least, among the people in the field of secondary education. The program cut their activities in two and drained off their students at the Junior and Senior levels. They did not counsel their students to enter the program at the first-year level of the College, nor did they send their teachers to the University to learn the content and techniques of general education so that the high-school programs could be upgraded in quality and material.

The second problem that developed concerned our relationships with our sister-institutions of higher education. It was the

original expectation that many institutions of higher education would shortly follow us in awarding the Bachelor of Arts degree for general education at the end of the fourteenth grade, or traditional Sophomore year in college. But none of them did. The result was embarrassing. A graduate of the most distinguished program of general studies in the country was often admitted to another institution as a Junior. When we protested such treatment, and proved by the Graduate Record Examination that our students were equal in training and competence to any in the country, it was pointed out that our own Divisions required three years beyond our Bachelor's degree for the Master's degree, so that we were treating our College graduates as Juniors too. A variation of this annoying problem was that students who entered the College program after graduation from high school—and most of them did enter at this level—were generally set back a year by the placement examinations. Consequently there were six years between high-school graduation and the Master's degree. And thus a system that had acceleration as one of its original virtues began to operate in reverse.

This unfortunate relationship with secondary schools and with institutions of higher education, including our own, pointed up a problem that starts as a practical problem but shortly becomes one of genuine educational importance. . . . How do we better relate ourselves to the total educational process—to the secondary system of education in this country, so that we improve and upgrade it by the things that we have learned; to our sister-institutions of higher education so that they may profit by the program of general studies that we have devised; and, finally, to our own divisions of specialization?

The final problem I wish to discuss with you is the most fundamental of all, since it is essentially one of educational philosophy. The problem arises from the fact that the phrase "general education" has become a

national slogan, and once a phrase becomes a slogan it takes on so many meanings that it runs the danger of losing any clear meaning, even to those who shout it. In fact, it is fairly safe to say: the louder the shouting, the fainter the meaning. . . .

Of the many meanings attached to the term "general education," let us concentrate on the two that seem most fundamental to us. An education that gives its students a *general* view of the important intellectual achievements of man is indeed general education. It is concerned with imparting an understanding of both the interrelations among these achievements and their differences in materials and methods. Its aim is to produce men and women who know that nothing is alien to them which is of fundamental importance to humanity. The men and women whom I know and respect have this first general education—a wide view of human achievements—but also something in addition—a special grasp of some field of human endeavor in which they move with confidence and purpose, adding to it contributions of their own. The second concept of general education, therefore, is the combination of an understanding of the achievements of others and at least a start toward *self-achievement*. It is a general education because it is the kind of education generally needed by those persons like yourselves who come to our University. . . .

I come now to the decisions arrived at recently by the Council of the University Senate, "the supreme academic body of the University," decisions arrived at after more than a year of study of the problems, both practical and theoretical, that I have just outlined. In restating the Council's decisions, I shall try to emphasize their structure and rationale, on the assumption that what circulates most freely and widely are small, scattered pieces of decisions and not their large intentions and connections.

*Point Number One.*—Hereafter, all programs leading to Bachelor's degrees will provide a general education in the two

basic senses I have previously defined. They will give the student a broad understanding of man's most important scientific and humanistic achievements; in addition, the student will be given at least a start toward the mastery of a field in which he shows special interest and promise. Since the student will be given both, he will have the kind of education, *generally* speaking, that should bring out the best in him and in us.

*Point Number Two.*—Several different Bachelor's degrees will be given hereafter, but basically they are of two sorts. The College will award a B.A., the program for which will consist of the present College program plus approximately a year of intensive study in a general field. The second Bachelor's degree will be jointly administered and awarded by the College and the various Divisions. The proportion of general and specialized work will vary with departments, since some, such as the foreign-language departments, must begin with students who commonly have little command over any language other than their own, whereas a department such as philosophy recognizes that our College gives its students unusual preparation in its field. But in no case will students be awarded a Bachelor's degree without demonstrating a thorough grasp of the main fields of knowledge and the main forms of communication.

With these degrees, the University will draw a wide diversity of students. Those who wish to take the full College program may still do so, and we hope that many can and will. But there are able students who are short of money or short of time, especially as the result of military service. There are also able students who, although wishing a wide background, have early been especially curious about one part of the intellectual scene and are impatient to start exploring it. Most of these will probably find the second of the degrees more suitable.

With only one fixed undergraduate pro-

gram we were becoming unwittingly more exclusive in certain senses than many eastern schools. But it was the intention of this mid-western university from the beginning to ask only that its students be able and willing, and to think that it was more a part of the land on which it stood if its students were poor and rich, young and mature, left and right, and odd and even.

*Point Number Three.*—All the new Bachelor's degrees are four-year degrees in that they begin at the traditional Freshman level rather than at the eleventh grade. Our program, therefore, will be related to the total American educational process, and we can begin to train teachers in secondary schools in our materials and techniques. But in two important senses they are not four-year degrees. We shall continue to test performance by placement and comprehensive examinations, and therefore not the calendar of Julius Caesar but ability and preparation determine the time needed to complete the program. Moreover, we have no four-year degrees in the sense that students must complete four years of high school before being admitted to the College. Students are admitted into the College on the same basis as they complete it—on the basis of ability and preparation as demonstrated by examination. The University is forever concerned about the able youngster who is wilting on some high-school vine. He should come here immediately and bear fruit.

These, then, are the main changes that have been made this year in our undergraduate education in order to relate it more closely to the University and to the American educational process as a whole.

#### THE UNIVERSITY OF BUFFALO EXPERIMENT

FOR TWENTY YEARS or more the University of Buffalo has carried on an experiment designed to eliminate unnecessary duplication of work

in college on the part of superior high-school students and to provide a means of acceleration. This program, originating under former Chancellor Samuel P. Capen and known as "anticipatory examinations for college credit," provides for the granting of college credit for work done in high school beyond that required for graduation. This has been done through examinations built and graded by college departments in subject areas corresponding to their own course offerings.

During the period from 1932 through 1946, a total of 1,496 persons took 2,730 examinations under the plan. Of the 2,730 examinations written, 2,227, or 81 per cent, resulted in credit. The maximum college credit earned by a high-school graduate has been 38 hours, or more than a year of college credit.

A report on the Buffalo plan was recently published under the title *Anticipatory Examinations for College Credit: Twenty Years Experience at the University of Buffalo*. Prepared by Mazie E. Wagner, it is published as Volume XX, Number 3, of the *University of Buffalo Studies*. The report closes with the conclusions quoted below:

I. College credit examinations are very valuable to the able student who passes them. They save him time, money, and energy. They give him a psychological boost for, having passed them, he feels assured that he is the kind of person who can succeed in college. They permit him to find his academic and intellectual level and so keep

him alert, interested, and active rather than bored and unproductive. Finally they show him early in his academic life how to prepare and master academic data on his own with the minimum of help from others.

II. College credit examinations are very valuable to the college that provides them for its ablest students, since they attract such students to the institution, assuming that most colleges desire to attract the cream of the crop. Earning college credit by examinations attracts able non-college-oriented students as well as perhaps some of those who might otherwise attend another institution.

Further advantages to the college are that as its faculty develop syllabi for the use of the applicants for these examinations, the professors writing them for the public eye become more critical of their course content and make changes where changes are in order. Also, institutions sending their able graduates to a college providing these examinations frequently enrich the curriculum for their superior secondary students in course content, as well as that the students themselves take a more nearly capacity load of class work.

III. College credit examinations are decidedly valuable to society at large. They show superior students, particularly those relatively indigent, how they may progress through college with less expenditure of time and money, and so salvage more of these able young people for higher education where they may develop themselves to a position of greater leadership and productivity for their society. Another advantage to society is the additional advanced degrees earned on the part of these superior young people. Last but by no means least, college credit examination bring these superior graduates into economic productivity and leadership sooner which is of especial value in these years of extreme manpower shortage.

### A CENTER FOR THE STUDY OF HUMAN BEHAVIOR

**R**ALPH W. TYLER, professor of education, dean of the Division of the Social Sciences, and University examiner at the University of Chicago, has recently been named director of the Center for the Study of Behavioral Sciences established by the Ford Foundation. As executive head of the Center, Dr. Tyler will administer a program for advanced study of individual behavior and human relations.

Through an initial grant of \$3,500,000 covering a six-year period, the Center will bring together each year approximately fifty scholars and scientists of first rank for advanced study and training. The objectives of the Center are: (1) to increase as rapidly as possible the number of highly competent scholars and scientists dealing with problems of human behavior; (2) to provide further opportunities for advanced study for present faculty members; (3) to encourage collaboration across traditional departmental lines; and (4) to make available new designs and materials for advanced study for use in graduate schools throughout the country.

In announcing the appointment of Dr. Tyler as director of the Center, Dr. Frank Stanton, chairman of the Center's Board of Directors and president of the Columbia Broadcasting System, said: "Dr. Tyler is especially well equipped to serve as director of the Center. He was chairman of the planning group composed of eminent

scholars in the behavioral sciences that recommended the establishment of the Center and designated its major characteristics. As an expert in the field of educational psychology, he is a recognized leader in the behavioral sciences in this country."

Dr. Tyler has resigned from his several positions in the University to take up his new duties on October 1.

### PARENT EDUCATION

**A** PROJECT in parent education has been established at the University of Chicago with a two-year grant from the Fund for Adult Education of the Ford Foundation. The project is being directed by Miss Ethel Kawin, professorial lecturer in the Department of Education in the University. According to Miss Kawin, the purpose of the Parent Education Project is "to help parents create for their children the kind of environment conducive to the development of mature, responsible citizens, able to build, to function in, and to maintain a free, democratic society."

The first undertaking of the Project will be the selection and preparation of materials for an experimental basic course in parent education. The basic course will be designed for study-discussion groups in parent education and will consist of packets of booklets, articles, discussion guides, suggested reading references, and other appropriate materials. Suitable films, radio and television programs, recordings, and other instructional media will be



identified and made available to study groups.

Following the preparation of the materials, the basic course will be tried out experimentally in a number of communities under the guidance of trained leaders. After the experimental materials have been tested in the pilot communities, the materials for the basic course will be distributed widely to interested groups.

Present plans call for the development, in addition to the basic course, of a series of supplementary courses adapted to various levels of child development—infancy, early childhood, middle childhood, pre-adolescence, and adolescence. These supplementary courses will also be tried out experimentally before being made available for wide distribution.

#### EARLY SCHOOL LEAVERS

ONE of the baffling problems which confront teachers and school administrators is the pupil who leaves high school before graduation for reasons within his own control. We pride ourselves in this country, as well we might, on our free public school system, extending almost universally through high school and in many communities beyond. Free education, so highly prized by millions in the world who cannot have it, is virtually placed on a platter and put before our youth. And yet many refuse the fare. Why?

In an effort to find out why so many young people in the state leave high school before graduation, a study of

the problem was undertaken through the sponsorship of the Kentucky Association of Colleges, Secondary, and Elementary Schools. The study was undertaken to "discover evidence which would indicate early signs of vulnerability to early school leaving and to determine measures secondary schools in Kentucky might take to increase their holding power." More specifically, the study undertook:

To determine significant factors associated with early school leavers.

To ascertain from former secondary-school pupils in selected communities of Kentucky factors relating to their termination of secondary-school education.

To identify significant characteristics and symptoms which influence certain youth to discontinue their education before secondary-school graduation.

To develop implications and recommendations for secondary schools in Kentucky for the purpose of increasing the holding power of these schools.

The study was limited to those youth who left high school in the state before graduation because of reasons within their own control during the period 1948-50 and who did not re-enrol in another school to complete their secondary-school education. A summary of the findings of the study is contained in the following excerpt:

As indicated by data collected, analyzed, and reported in this investigation there appear to be certain symptoms or signs of vulnerability to possible early school leaving which may be identified. Early recognition of these signs and prompt action by local school personnel would reduce the incidence of early school leaving and thereby increase the holding power of the secondary schools of Kentucky.

Evidence seems to indicate that many pupils who withdraw from Kentucky secondary schools prior to graduation experience frequent grade failure and retention in the elementary school. Failure and repetition of the first grade is particularly noticeable.

Data presented in the study emphasize the regression in scholarship evidenced by early school leavers as they progress from the elementary to junior to senior high schools.

Failure or lack of opportunity to participate in extra-curriculum activities seems to be a definite characteristic which may be observed in recognizing those pupils vulnerable to early school leaving.

Evidence seems to indicate that early school leavers of Kentucky come from homes which are typical for all youth fourteen to seventeen years of age in the United States.

There is no evidence that any relationship exists between the number of children in the family and the probability of one of the youth leaving secondary school before graduation.

Early school leavers of Kentucky seem to be pupils in the local school system for several years before they withdraw. The findings of the study reveal that the early school leavers have very few, if any, transfers.

Preference for work was given as the primary reason for leaving secondary school before graduation by the greatest number of youth included in the study. Over half of all reasons (primary and contributing) for leaving school were concerned with the school.

Most of the youth leaving school withdrew without consulting any of the personnel connected with the school.

The youth suggested the secondary schools of Kentucky should provide some program of work experience. Other leading suggestions were for the school to provide specific vocational instruction and an

opportunity for more participation in school activities.

Business, shop experience, and home economics were the subjects most often indicated by the early school leavers in Kentucky as the subjects most needed or desired since leaving secondary school.

#### TELEVISION OMNIBUS

THE CRUCIAL NEED for educational television has been the subject of a great deal of discussion in educational literature and in the public press during the last two or three years. By educational television is usually meant television stations or channels owned and operated by educational or public agencies as contrasted with commercial television. Much of the agitation for educational television is based on the assumption that commercial companies are unwilling or unable to produce programs of educational value or that such programs would, at best, be the exception rather than the rule. It is often argued that, inasmuch as the chief source of income is from sponsors who have things to sell, the quality of programs will inevitably remain low. The history of radio and of television to date gives some grounds for this view. Much of the fare offered listeners is anything but educational, and it is altogether possible that only strong competition from educational television is likely to bring about much change.

Attention should be drawn, however, to the unusually fine programs which most of the networks have provided from time to time. Notable

among these is the series of twenty-six programs under the title "Omnibus" which were produced by the TV-Radio Workshop of the Ford Foundation and shown through the facilities of the CBS television network each Sunday afternoon.

These exceptionally fine educational programs were broadcast in 59 American cities to 76 per cent of the country's 21,955,000 television-equipped homes. A total of 13,340,000 persons viewed a single program, and an average of 10,750,000 saw "Omnibus" throughout the season.

The TV-Radio Workshop with its initial "Omnibus" series has shown that standard television in the United States can become an important means of conserving and increasing our knowledge and enriching our culture. "Omnibus" provided for advertising messages in each program, and the cost of the series was early assumed by five corporations.

#### TEACHING VALUES

AS ANYONE who has followed educational literature in recent years must have observed, teachers and administrators at all school levels are genuinely concerned about the problem of teaching values, be they moral values, spiritual values, or values in any other area of personal and social living. This deep concern stems from our growing conviction, first, that, if we are to achieve the good life and the good society, all men and women, and boys and girls, too, must develop for themselves a set of values to guide

their behavior and, second, that the schools must assume increasing responsibility for helping children and young people to achieve a philosophy of life based upon value patterns in keeping with the tenets of a democratic society and in harmony with the basic religious principles of Western civilization.

Dr. Joseph Axelrod, associate professor of humanities and curriculum evaluation at San Francisco State College, has contributed to our thinking in this area in a stimulating article in the March, 1953, issue of the *California Journal of Secondary Education* entitled "The Teaching of Values in the Changing Community." In the following excerpts Mr. Axelrod offers useful suggestions to teachers who are struggling with the problem of teaching values:

In order to think through to a solution, educators may find the following basic distinction between two types of value principles a useful one: (a) a *method* value principle, and (b) a *content* value principle.

A method value principle sets forth a way of looking at data or of approaching a problem; such a principle does not assert what is to be believed or held as does a content value principle, but asserts only a way in which one is to arrive at the content principles which he comes to hold. For example: "A national government ought to punish any individual who preaches its overthrow" is an assertion of a content principle. A method principle would be of this kind: "Even though one is certain of his answer to any question, he ought to operate under the assumption that he may change his mind in the future." Both examples state values; the first might be labeled the value of "national security," and the second might be

called the value of "open-mindedness." Whether they are right or wrong values is not here the question. The point is that they are of different kinds—one of them asserting a given content of belief, the other setting forth a given method of arriving at or treating the content values one holds.

In the foregoing distinction, the educator may find a key to the teaching of values, especially if his concern is with an institution such as the public school which is charged with the task of serving the needs of communities that today, with rare exceptions, are changing with astounding rapidity and the dominant values of which are both heterogeneous and unstable. Whereas there are great difficulties in reaching widespread agreement about the content values which should serve as ends of education, it is easier to reach agreement about which method values might serve as educational ends.

It would be foolish to pretend that, once such agreement had been obtained, the major difficulties would cease; it is probably truer to say that they will have just begun. The first difficulty is the translation of the *method* value principles into attitudinal and behavioral goals. . . . The second is to modify the written curriculum in terms of the new goals, so that they are seen in an additional dimension in which some suggestions are offered as to the means that might be employed in the attainment of these goals.

The most difficult of the steps is that of translating the written curriculum into a real curriculum—i.e., of making the actual classroom experiences of the pupil meaningful and effective in terms of the stated goals. It would appear that this very difficulty is

the one which, at present, is responsible for the degree of educational failure which is so apparent on the secondary-school and undergraduate college levels. Good written curriculums so often remain untranslated into pupil experience in the classroom. One of the reasons why method goals are rarely translated into pupil experience which encourages practice in the skills leading to those goals is that teachers everywhere are so concerned about covering a certain subject matter.

One of the advantages of educational goals which are behavioral translations of method value principles is that they call forth no compulsion to cover all the content in the area being studied. The frequency of this compulsion indicates that it meets a great need among high-school and college teachers in that it provided at once a weapon for self-laceration and an excellent protection against any "new" ideas that might suggest goals other than content coverage.

When a unit of teaching focuses, however, on the attainment of an end expressed as a method value, then the study of content values becomes unavoidable; yet such study, within that framework, carries with it no necessity on the part of the teacher to uphold the superiority of any single content principle over another. The teacher, therefore, by taking method values as his goals does not find himself forced out of neutral position during a discussion of some situation calling for consideration of content value principle, for his concern is not with the teaching of this or that specific content value but rather with creating the kinds of experiences for the student which will aid the attainment of method value goals.

HAROLD A. ANDERSON

## WHO'S WHO FOR OCTOBER

*Authors of news notes and articles* The news notes in this issue have been prepared by HAROLD A.

ANDERSON, assistant professor of education and executive secretary of the Committee on Preparation of Teachers, the University of Chicago. LEONARD V. KOOS, professor of education at the University of Chicago, in the first of three articles dealing with junior high school reorganization, gives the historical background of the movement and an inventory of the growth and status of reorganized schools. JOHN W. MCFARLAND, assistant professor of curriculum and instruction at the University of Texas, states the purposes of the home room, points out why these purposes are often unrealized, and suggests ways of making the home room more effective. BERTIS E. CAPEHART, assistant superintendent in charge of instruction in the Oak Ridge, Tennessee, public schools; ALLEN HODGES, director of guidance and school psychologist for the Oak Ridge public schools; and ROBERT ROTH, head guidance counselor at the Oak Ridge High School, give the results of a study which measures the gains in English skills and in critical thinking made by high-school students in a core group in comparison with gains made by students in a non-core group. JAMES

J. THOMPSON, teacher of biology at Central High School, Newark, New Jersey, presents a unit on bacterial diseases which was developed to help train students in the scientific method of thought. GEORGE A. C. SCHERER, associate professor of modern languages and modern-language education at the University of Colorado, describes the background of teacher-training candidates in Bavaria, some of the requirements that they must meet, their training program, and how their performance is evaluated. PAUL B. JACOBSON, dean of the School of Education, University of Oregon, and ROBERT R. WIEGMAN, assistant professor of education at the University of Portland, Portland, Oregon, present a list of references on the organization and administration of secondary education.

*Reviewers of books* ARTHUR E. TRAXLER, executive director of the Educational Records Bureau, New York City. JOHN A. RAMSEYER, professor of education at Ohio State University. CYRIL O. HOULE, professor of education at the University of Chicago. ROLAND C. FAUNCE, associate professor of education at Wayne University.



# JUNIOR HIGH SCHOOL REORGANIZATION AFTER A HALF-CENTURY

## I. GROWTH AND STATUS OF REORGANIZATION

LEONARD V. KOOS

*University of Chicago*



IT IS now about a half-century since the establishment and operation of prototypes of the junior high school, and an appropriate point at which to take stock of the reorganization movement. Although it is only something over forty years since the establishment of three-year units in Columbus, Ohio, and in Berkeley and Los Angeles, California, there had been two-year units and six-year high schools including Grades VII and VIII ten or more years earlier. Thus, the span of existence of reorganized schools may properly be considered as extending over a period of about fifty years. Advocacy of reorganization, to be sure, reaches back much further.

His own long-time interest in the movement has prompted the present writer to undertake this inventory of the growth and status of the movement and a review of thinking regarding it and to consider the prospects of further reorganization. His book was one of the first two commercial publications<sup>1</sup> dealing exclusively with the new unit although a few noncommercial monographs were in print be-

fore it. A stock-taking seems desirable in view of a questioning attitude toward the movement in some quarters, which is reflected in occasional periodical articles appearing recently with captions like "Has the Junior High School Kept Its Promise?" and "Has the Junior High School Made Good?" and in consideration of similar questions from time to time at educational discussions here and there throughout the country.

In the main, the writer's preparation for this inventory is more or less continuous contact with the movement for more than a third of a century. This contact has involved firsthand visits extending from 1915 to 1951 to upwards of two hundred schools of several existing patterns of reorganization—visits that were often accompanied by participation in sur-

<sup>1</sup> Leonard V. Koos, *The Junior High School*. New York: Harcourt, Brace & Howe, 1920. This book was republished in an "enlarged edition" by Ginn and Company in 1927, and this later edition has been out of print for many years. The other commercial book published in the same year was Thomas H. Briggs's *The Junior High School*. Boston: Houghton Mifflin Co., 1920.

veys of the schools and school systems represented. The observations from these contacts have been extended by canvassing all available recently published literature, including books and articles in periodicals dealing with junior high school reorganization. The literature includes all reports of research on status and trends. The firsthand contacts and the reading have been supplemented by information given in current materials relating to purposes, programs, and activities in junior high schools—materials supplied by administrators in twenty-four school systems in sixteen states distributed to all sections of the nation and representing more than a hundred individual school situations.

#### GROWTH AND STATUS OF REORGANIZATION

Report on the growth and status of junior high school reorganization during the earlier decades of the movement is hampered by the lack of systematic and official counts of schools and systems operating under the new plans. Among the earliest enumerations are those prepared by Douglass<sup>2</sup> and Briggs,<sup>3</sup> but an indication of trends in them, except in a very general way, is hardly possible because the data are not comparable with those in later compilations. The

<sup>2</sup> Aubrey A. Douglass, *The Junior High School*, pp. 27, 140-45. Fifteenth Yearbook of the National Society for the Study of Education, Part III. Chicago: National Society for the Study of Education (5835 Kimbark Avenue), 1916.

<sup>3</sup> Thomas H. Briggs, *op. cit.*, pp. 60-62.

United States Office of Education, the logical agency for assembling such information, did not make a systematic count of reorganized schools until 1922. Fortunately for purposes here, the Office has made counts on roughly comparable bases at intervals since that year; and from the compilations which are reported in Table 1, it is possible to note the growth from 1922 to 1952. Figure 1, based on the evidence in the table, has been prepared to aid in interpreting the information. The inclusion in the table and figure of evidence concerning "regular" high schools, that is, four-year high schools in unreorganized systems, makes possible a direct comparison of numbers and proportions of reorganized with unreorganized schools.

The general impression afforded by the table and figure is one of rapid and almost steady growth of reorganization and gain over unreorganized schools throughout the thirty-year period represented. By the end of the period, reorganized schools substantially outnumbered the regular high schools. A mere cursory glance at the rate of increase will find it to have been fully as rapid during the latest interval as during any previous period.

Evidence in the table and figure is presented in such a way as to show the proportionate contributions of separate junior high schools, separate senior high schools, and junior-senior high schools to the total reorganization. However, the numbers and proportions of schools of the various combinations of grades, such as three-

grade junior high schools, are not shown, and this information is not regularly available. In 1930 the National Survey of Secondary Education co-operated with the Office of Education in gathering the evidence concerning reorganization and inquired into the grade patterns of reorganization. Table 2 is based on information

grade senior high schools, and six-year schools reported to be on a 3-3 or "undivided" basis.

It may be noted that, while Table 1 contains the category "junior-senior high schools," Table 2 lists both "junior-senior" and "undivided" six-year and five-year high schools. This is because, for the first table utilized

TABLE 1  
NUMBER OF THE VARIOUS TYPES OF PUBLIC HIGH SCHOOLS  
IN THE UNITED STATES, 1922-52\*

TYPE	1922		1930		1938		1946		1952†	
	Number	Per Cent of Total	Number	Per Cent of Total	Number	Per Cent of Total	Number	Per Cent of Total	Number	Per Cent of Total
Junior high schools.....	387	2.8	1,842	8.3	2,372	9.6	2,647	11.1	3,227	13.6
Junior-senior high schools.....	1,088	7.7	3,287	14.8	6,203	25.2	6,358	26.5	8,591	36.2
Senior high schools.....	91	0.6	648	2.9	959	3.9	1,317	5.5	1,760	7.4
All reorganized schools..	1,566	11.1	5,777	26.0	9,534	38.7	10,322	43.1	13,578	57.2
Regular high schools....	12,490	88.9	16,460	74.0	15,056	61.3	13,625	56.9	10,168	42.8
Total.....	14,056	100.0	22,237	100.0	24,590	100.0	23,947	100.0	23,746	100.0

\* Based, for evidence for 1922, 1930, 1938, and 1946 on *Statistics of Public High Schools, 1945-46*, Table VII, p. 11. United States Office of Education, *Biennial Survey of Education in the United States, 1944-46*, chap. v. Washington: Government Printing Office, 1949.

† Based, for 1952, on information supplied in correspondence with this writer by the United States Office of Education.

‡ Includes for this year small high schools with enrolment from 1 to 9.

gathered for the Survey and discloses the grade-groupings reported for 5,740 schools in what are referred to in the report as the "major" patterns of reorganization. The small number of remaining reorganized schools identified in that year were of less common grade patterns, like two-grade senior high schools and one-grade junior high schools. It is clear from this table that in 1930 the predominant grade-groupings involved three-grade junior high schools, three-

here, the compiler combined the two under a single category, although he reports (in the textual interpretation) the number of "undivided" high schools as having increased from 3,060 to 3,326 from 1938 to 1946 and, therefore, accounting for the entire increase of the "junior-senior" classification during that interval.

This writer, having been a party to the compilation of the status of reorganization in 1930, is disposed to belittle the significance of the distinction

between the terms "junior-senior" and "undivided" as applied to these compilations, for he recalls that no criteria were set up to distinguish the schools represented. The heads of the schools and systems were left to their own dis-

cretion in reporting their organizations under these classifications. It is not that there is no distinction in theory between a "junior-senior" and an "undivided" school but that, in actual practice, one school reported as an undivided six-year school might be effecting as much or more separation between junior and senior levels than another one reported to operate on a junior-senior basis. For the purposes here of reviewing growth and trends, these two categories may be regarded as a single inclusive group.

In some ways a better measure of growth and status of reorganization than has been reported in Table 1 and Figure 1 is to be found in the per cents of all pupils who are enrolled in reorganized and in regular high schools. The latter give us a more nearly direct measure of the actual proportion of the school population brought under the influence of reorganized schools. The specific measures used here are the per cents of all pupils in the last four high-school years (usually, but

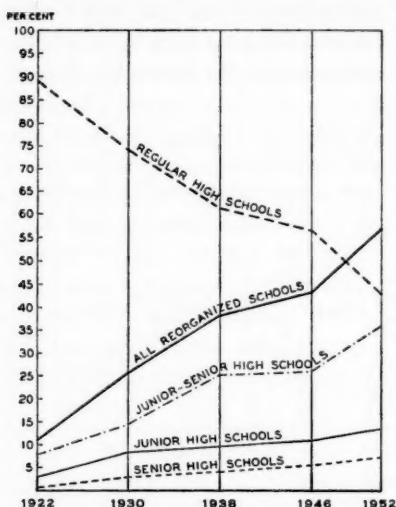


FIG. 1.—Per cent that junior high schools, senior high schools, junior-senior high schools, all reorganized schools, and regular high schools were of all public secondary schools in 1922, 1930, 1938, 1946, and 1952 (based on data in Table 1).

TABLE 2  
NUMBERS OF REORGANIZED SCHOOLS OF DIFFERENT  
GRADE-GROUPINGS IN 1929-30\*

Type of School	Number	Type of School	Number
Junior high schools:		Junior-senior and undivided schools:	
Two-grade.....	204	Junior-senior, 3-3.....	936
Three-grade.....	1,348	Junior-senior, 2-4.....	637
Four-grade.....	196	Undivided, 6-year.....	1,446
Senior high schools:		Undivided, 5-year.....	65
Three-grade.....	496	Total.....	5,470
Four-grade.....	142		

\* Based on Francis T. Spaulding, O. I. Frederick, and Leonard V. Koos, *The Reorganization of Secondary Education*, Fig. 3, p. 53. National Survey of Secondary Education, Monograph No. 5. United States Office of Education Bulletin 1932, No. 17.

not always, Grades IX-XII) in reorganized systems and in regular high schools, irrespective of the grade-grouping of the system. The per cents for certain years at intervals beginning with 1922 are shown both in Table 3 and in Figure 2. To save space, the numbers of pupils are not reproduced, although it may be reported illustratively that, for 1952, a total of 5,673,867 pupils in these four

the period. Reorganization, measured in this way, had become numerically predominant by 1946, and by 1952 reorganized schools enrolled approximately two-thirds of all pupils in the last four high-school years of public

TABLE 3  
PER CENTS OF PUPILS IN THE LAST  
FOUR HIGH-SCHOOL YEARS EN-  
ROLLED IN REORGANIZED AND  
IN REGULAR HIGH SCHOOLS,  
1922-52\*

YEAR	PER CENT OF PUPILS	
	In Reor- ganized Schools	In Regu- lar Schools
1922.....	13.5	86.5
1926.....	28.3	71.7
1930.....	33.9	66.1
1934.....	37.0	63.0
1938.....	45.6	54.4
1946.....	50.9	49.1
1952.....	65.9	34.1

\* Data for 1922, 1926, 1930, 1934, and 1938 based on *Statistics of Public High Schools, 1937-38*, Fig. 2, p. 10. *Biennial Survey of Education in the United States*, chap. v. United States Office of Education Bulletin 1940, No. 2.

Data for 1946 based on *Statistics of Public High Schools, 1945-46*, Table 9, pp. 36-39. *Biennial Survey of Education in the United States, 1944-46*, chap. v.

Data for 1952 based on information supplied in correspondence with this writer by the United States Office of Education.

grades is represented, 3,739,622 in reorganized and 1,934,245 in regular high schools.

The evidence in this table and figure as compared with that in Table 1 and Figure 1 underscores the rapidity of the rate of reorganization throughout

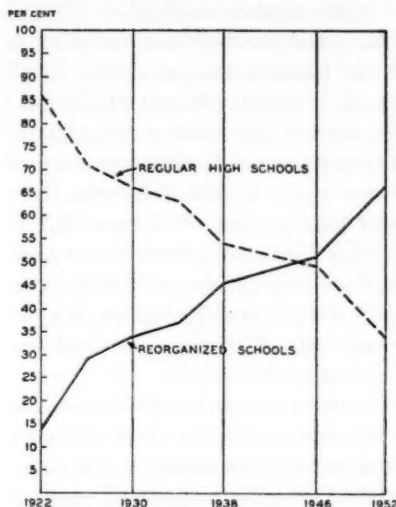


FIG. 2.—Per cents of all pupils enrolled in the last four high-school years in 1922 to 1952 who were enrolled in reorganized and in regular high schools (based on Table 2).

secondary schools. When attention is directed to the rates of increment during individual intervals, it may be noted that the only two during which there was marked retardation of rate were the interval immediately following 1930 and that between 1938 and 1946. The reader can explain for himself the first of these slowdowns by the early years of the great depression. When resources were again available for building construction, on which reorganization must usually wait, the re-acceleration shown between 1934



and 1938 took place. The clamping-down of priorities on building materials before and during World War II will explain the second retardation, which was in turn followed by another and striking re-acceleration.

Still another indication of the status and growth of reorganization is to be found in the proportions of all pupils in Grades VII and VIII in public schools that were enrolled in reorganized schools. The per cent of these pupils advanced between 1946 and 1952 in Grade VII from 37.5 to 47.0; in Grade VIII, from 44.4 to 55.8; and in both grades combined, from 39.3 to 51.2. In this measure, also, reorganized schools have attained numerical predominance.

Before leaving consideration of the numerical status and trends of junior high school reorganization, it is desirable to draw, for purposes of comparison, on the evidence and conclusions in this particular area from a rather recent inquiry reported in a Bulletin issued by the Research Division of the National Education Association.<sup>4</sup> The specific materials referred to here concern the (1) "patterns of organization" and (2) "changes in the number of junior high schools in operation" in city school systems.

The tabulation of patterns of organization as reported from 1,372 city systems in this inquiry yielded the following proportionate frequencies:

<sup>4</sup> *Trends in City-School Organization, 1938 to 1948*. Research Bulletin of the National Education Association, Vol. XXVII, No. 1. Washington: Research Division of the National Education Association, 1949.

6-3-3, 35 per cent; 8-4, 23 per cent; 6-6, 16 per cent; 6-2-4, 12 per cent; 6-3-3-2, 4 per cent; 7-5, 3 per cent; 5-3-4, 2 per cent; 6-2-4-2, 1 per cent; 7-2-3, 1 per cent; "other," 3 per cent.

In commenting on the evidence, the Bulletin says: "In these cities the 6-3-3 plan of organization . . . is used as the prevailing type more frequently than any other. Nevertheless, this plan is the prevailing type in only about one-third of the city systems."

In further comment, the Bulletin says that the diversity of plans "demonstrates rather clearly that variation and experimentation is still the order of the day in the matter of school organization and that as yet no single pattern has become the clearly dominant type."<sup>5</sup> The interpretation, while correct as to the external evidence, overlooks the impressively important fact underlying the figures: that the patterns involving *some* plan of junior high school reorganization, designed to serve the early adolescent better than does the traditional organization, include all those groupings listed excepting the 8-4, and, probably, also some of the 3 per cent of "other" patterns. The total of the per cents of all the reorganized patterns is not less than 74, which is more than three times the proportion still following the traditional plan.

The Research Bulletin referred to, in a section called "The Junior High School, 1938 to 1948" also reports in a table the changes in the numbers of junior high schools in operation in

<sup>5</sup> *Ibid.*, pp. 10-11.

1,598 city school systems during the ten-year interval represented. Following are sentences from the interpretation of the table.

For the most part, the table indicates comparatively little change with respect to junior high schools, especially in the groups of smaller cities. . . . In the larger cities the number of junior high schools has fluctuated somewhat more than in the smaller ones; but no important net increase has occurred. . . .

When allowance is made for those [junior high schools] undoubtedly established merely because of population growth in cities already having the junior high school unit, it is apparent that the number of school systems changing from the traditional elementary-secondary plan to a pattern of elementary, junior high, and senior high schools has been relatively small.<sup>6</sup>

Here again the interpretation accords with the evidence in the table referred to, while at the same time leaving unsaid much that would afford a better understanding of reorganizational trends. In the first place, during the most of the span of years represented, as may be inferred from what was said above in interpreting Table 3 and Figure 2, materials for construc-

tion were not available for new housing that would have been required for any significant increase in the number of junior units. As soon as priorities were lifted, re-acceleration was resumed. In the second place, as may be judged from the comment above on other grade patterns embodying junior high school reorganization, an inquiry considering merely changes in the number of *separate* junior units can give only a partial picture of trends in this educational area.

In view of all the evidence, there can be no denying that, as measured by the numbers and proportions both of schools and of pupils, junior high school reorganization has been over a long period—a half-century and more—a most dynamic movement. The magnitude and the significance of this movement will become more apparent as the changes within these schools are reviewed in two subsequent articles. These articles will consider "Purposes of, and Grade-Grouping for, Reorganization" and "The Curriculum and Other Features."

[To be continued]

<sup>6</sup> *Ibid.*, p. 12.

## DEVELOPING EFFECTIVE HOME ROOMS

JOHN W. McFARLAND

*University of Texas*



THE HOME ROOM in the secondary school (sometimes called the "activity period" or the "advisory") is an abused institution, handicapped not only by shadowy and unrealistic expectations but also, in some schools, by ineffective organization, lack of emphasis, and the poor preparation of students and teachers for participation in home-room activities. At its best, the home room is a group composed of boys and girls and a sponsor, working together for the co-ordination and enrichment of the members' education and school life and for the realization of certain clearly defined purposes.

### PURPOSES OF THE HOME ROOM

The purposes as stated in the literature are sound and commendable.<sup>1</sup> Among the most significant purposes are those summarized below:

1. To provide, or to facilitate the provision of, needed guidance and counseling for home-room members
2. To co-ordinate the pupil activity program
3. To provide democratic and co-operative group experiences, leading to the development of effective citizenship

<sup>1</sup> H. C. McKown, *Homeroom Guidance*. New York: McGraw Hill Book Co., Inc., 1946 (revised).

4. To provide a basis and a constituency for student government
5. To co-ordinate, enhance, and clarify the entire learning program of the school
6. To provide individual and personal help and attention for pupils
7. To expedite administrative and clerical work, exploiting routine jobs as opportunities for educative experiences

In some schools there exist organizations masquerading as home rooms—organizations which by their very nature could not possibly fulfil the purposes named above. In other instances, sincere persons working in a carefully organized program fail to achieve the goals of the home room. What are the reasons for the ineffectiveness of some home rooms?

### HOME-ROOM INEFFECTIVENESS AND HOW TO OVERCOME IT

Perhaps the five major reasons for ineffectiveness are lack of time, failure to understand the purposes of the home room, indifference of teachers, lack of trained personnel, and inadequate program-planning. These five difficulties will be discussed in turn, and suggestions will be offered for overcoming them.

1. *Lack of time.*—It is difficult for any group of approximately thirty

people to attack problems in such a manner that the purposes mentioned above can be achieved in infrequent or brief periods, particularly when those brief periods are subject to repeated interruptions. It is doubtful whether a period of less than thirty minutes can be regularly used to advantage for prepared programs, for group discussions of problems significant to youth, for experiencing democracy, and for group or individual guidance.

*Suggested remedy.*—In order to carry on projects conducive to group unity and morale, additional time for co-operative group action is needed. If the purposes of the home room are sufficiently significant to merit a place in the school schedule, then they demand adequate time and effort to provide a reasonable opportunity for success in the endeavor.<sup>2</sup> If the home room can be scheduled for a daily period of thirty or more minutes and if that daily period can be kept reasonably free from interruptions, then pupils and sponsor can learn to know one another and to work together in harmony. They need time to work toward the fulfilment of their objectives.

2. *Failure to understand the purposes of the home room.*—Few teacher sponsors and even fewer pupils are aware of the seven purposes listed at the beginning of this article for the home room, or of comparable purposes. Even fewer utilize such objectives as definite bases for purposeful

action in the improvement of the home-room program. The home room is looked upon by too many teachers and pupils as a necessary evil in the school day, as a time for dull and unimportant routines, or as a time for rest, relaxation, and recreation. Now, the routine tasks must be performed, and rest and recreation in the middle of the day may be desirable, as they enable school personnel to work better for the remainder of the day. Nevertheless, the home room as a learning and developing group deserves emphasis equivalent to that accorded a regular class.

One reason that teachers and pupils fail to understand home-room objectives may lie in the manner in which the home room was established. In many communities the home room has been inaugurated arbitrarily by the principal or the superintendent without the participation of faculty or students in the decision and without a consensus of support on their part. The purposes were not made clear at the beginning, and busy teachers have not found time to make them clear.

*Suggested remedy.*—The mere reading or study of a list of objectives is insufficient. Teachers and pupils must participate in formulating the objectives of the home room and in organizing the program in such a way as to realize those objectives. If the purposes of the home room are not clear to teachers and pupils, it is not too late for them to work together, in co-operation with the principal and superintendent, in clarifying the pur-

<sup>2</sup> G. M. Van Pool, "Homeroom," *Bulletin of the National Association of Secondary-School Principals*, XXXVI (February, 1952), 150-56.

poses of the home room in their own schools.

3. *Indifference of teachers to the home room.*—The lack of teacher enthusiasm for the home room arises naturally out of the lack of time, failure to understand the home room, and the fact that at its inception the home room was usually added to the already heavy teacher load without corresponding compensation in any form. When a school group contemplates the inauguration of a home room in a secondary school, as many persons as possible, with representatives from each group concerned, should participate in the decision to institute the home room in that school.

*Suggested remedies.*—If it is at all possible, compensation for the extra load afforded by the home room should be provided. Although the writer does not know of any school system where home-room teachers receive a special increment because of their sponsorship of home rooms, such duty provides a reasonable basis for salary increases. The salary increment can serve the double purpose of providing more just remuneration for teachers and of giving an effective incentive for more assiduous efforts toward effective home rooms.

In several Texas high schools, arrangements are made periodically to lighten the teaching loads of home-room sponsors. In one large high school, two extra teachers were employed, thus providing for the teaching of ten classes and releasing ten home-room sponsors for an extra con-

ference period daily. Each sponsor taught four classes and a home room instead of the customary load of five classes and a home room. It is possible to rotate such a release from teaching responsibility so that each regular home-room sponsor can have an extra conference hour or free period every three or four semesters. A teacher for whom this is done feels that his efforts as a home-room sponsor are recognized as worth while; he may therefore develop a more wholesome attitude toward the home room.

The most fruitful route for overcoming the indifference of teachers to the home room lies in convincing them of the merit of the home-room plan.<sup>3</sup> Those sponsors who have developed effective home-room groups and who have realized the values to pupils are willing to continue to work toward those recognized ends. Those who have not achieved success with the home room might profit from visiting effective home rooms and from conferring with enthusiastic home-room sponsors. As a minimum, time should be taken and intelligent effort expended for careful consideration of the potentialities of the home room.

4. *Lack of trained personnel.*—Even if the sponsor and pupils are willing to work diligently on home-room programs and if they begin the year with zeal and enthusiasm, their efforts are doomed to mediocrity if they are not properly prepared for their duties.

<sup>3</sup>W. Scott Smith, "A Plea for the Home-room," *School Activities*, XVII (September, 1945), 3-4.



Much of the responsibility for the teachers' lack of preparation and of understanding falls on the colleges which prepare teachers.

*Suggested remedies.*—Future teachers should study carefully the purposes and potentialities of the home room; they should learn from successful home-room sponsors the techniques that brought success and the problems confronting sponsors; and, as student teachers, they should assist a home-room sponsor for a semester. Few colleges now provide such learning experiences.

Superintendents and principals who find teachers unprepared for their responsibilities as home-room sponsors need to provide opportunities for them to work co-operatively to develop the competence and understanding necessary for effective sponsorship. A significant approach to such preparation is in a thorough appraisal of the present home-room system, followed by free planning or adaptation of the organization for the future.

Pupils, too, need orientation and preparation for their responsibilities as home-room members.<sup>4</sup> Usually the initiative in providing such preparation is assumed by the home-room teacher. An innovation is the institution of a school-wide training course in which the home-room presidents and program chairmen receive special instruction. Several Texas high schools have such a course. Topics that can

well be included in a leaders' training course include the following:

1. Aims and objectives of the home room
2. Conducting a meeting
3. Organizing and facilitating committee work
4. Parliamentary procedure
5. Relations between home room and student council
6. Preparation of programs
7. "Staging" or presentation of programs
8. The job of the program chairman
9. Individual roles in a group discussion
10. Home-room projects
11. Specific activities of home rooms in other schools
12. Topics and ideas for programs

For some of the sessions of the training course, separate group meetings can be arranged in a large school for all the presidents, all the program chairmen, or the home-room officers of each grade level. Teachers, students, administrators, and laymen can share the responsibilities of instruction. The principal, a counselor, or a competent and enthusiastic home-room sponsor should guide the discussions of aims and objectives, of home-room projects, and of descriptions of activities used in other schools. Perhaps the parliamentarian of the student council could teach all the home-room officers parliamentary procedure. The officers and the sponsor of the student council could lead the discussion of the relation between the home room and the student council. The speech teacher is the natural person to instruct the officers in how to preside and how to "stage" a program. In like manner specialists can be found for most of the other topics.

<sup>4</sup>G. K. Drake, "We Teach Them To Lead," *California Journal of Secondary Education*, XXVI (December, 1951), 477-83.

5. *Inadequate program planning.*—Many sponsors and student program chairmen have difficulty in finding activities and ideas suitable for the home-room program. This seeming dearth of ideas exists in spite of the varied interests of youth and the many learning experiences that they need. Perhaps ideas are lacking because of the absence of constructive thought and effort in that direction. Students are sometimes reluctant to suggest activities for the home room and to express their problems and concerns. They look upon the home-room period as a time to waste, because no credits or marks are awarded for participation in the home room. This lethargy must be overcome on the basis of the proved worth of home-room activities. Teachers and pupils must be awakened to the variety of ideas and materials available for home-room use.

*Suggested remedies.*—One approach to the preparation of home-room leaders, which was mentioned earlier, places primary emphasis on program materials and ideas. In some cases home-room program chairmen can meet together for orientation concerning selected topics that can be used for programs. Ways of presenting a particular program and ways of developing group co-operation can be studied in such a group. Books, pamphlets, and other materials dealing with problems that concern young people can be examined and evaluated. Although the publication of a local handbook or guide for home rooms is not neces-

sarily advocated, there should be some provision for exchange of ideas and accumulation of program material.

One thing is certain: the success of a home-room program in a given school is contingent upon the wholehearted co-operation of all members of the school community. It is urged that a co-ordinated and representative group from the administration, the faculty, and the student body plan the general organization and outline of the home-room program and that members of individual home rooms should have the final authority for the immediate programs. Good and sufficient reasons for such pupil participation lie in the enlistment of good will and interest in the home-room program. Even better reasons are that pupils are more likely to embody in the programs materials and activities which fulfil their real needs and that participation of this kind by its own action exemplifies democracy.<sup>6</sup>

Activities of the home room should include group and individual guidance, special programs, discussions of problems important to home-room members, recreation, rest, work on service projects, and instruction in matters not covered in the regular courses, in addition to routine clerical and administrative activities.

6. *Other reasons for ineffectiveness of home rooms.*—Inefficient organization

<sup>6</sup> W. D. Payne, "Experiences in Homeroom Administration," *Bulletin of the National Association of Secondary-School Principals*, XXX (April, 1946), 120-23.

of home rooms can prevent the realization of the objectives. Scheduling the home room at a bad time of day is disadvantageous. Gruhn and Douglass emphasize the importance of timing in this way, "The work of the home-room period is sufficiently important to assign it the most favorable place in the daily schedule."<sup>6</sup> Failure to provide help and supervision for home-room sponsors also jeopardizes the chances for success.

Frequent interruptions of the home-room period by the making of announcements and by calling pupils out of the room for other activities disrupt the program and indicate that the program is not considered important. In a survey made in 1948, one principal reported that he scheduled home room "on days when no other activities were scheduled."<sup>7</sup> Such a low priority for home-room activities on the part of the faculty relegates them to a similar rank in the minds of pupils.

The lack of balance in the home-room program also tends to diminish its effectiveness. In certain cases there is either too much or not enough emphasis on social activities. In other schools, group discussions are used until their appeal has worn thin.

<sup>6</sup> W. T. Gruhn and H. R. Douglass, *The Modern Junior High School*, p. 320. New York: Ronald Press Co., 1947.

<sup>7</sup> John W. McFarland, "A Study of the Home Room in Two-Hundred Fifteen Texas High Schools." Unpublished Master's thesis, University of Texas, 1948.

Another factor in the success or failure of the home room is the attitude of the sponsor toward the pupils.<sup>8</sup> Neither a dominating nor a laissez faire attitude is conducive to co-operative effort in the home room. A truly democratic approach involves co-operative teacher-pupil planning of home-room activities. The sponsor must be permissive and receptive to pupil ideas, and yet he must also be resourceful and willing to use his own initiative.

#### CONCLUDING COMMENT

In spite of the reasons listed above for the ineffectiveness of some home rooms, potentially the home room is extremely valuable when a group of fair-minded, zealous, and patient pupils and a sponsor with like attributes work together. Ideally, the home room includes a group of boys and girls and a sponsor meeting together regularly and dedicated to the enhancement of each pupil's education and to the effectiveness of his school life. The home room can be the pupil's "base of operations" for the day's work. It can provide the framework and foundation for student government and for the activity program. Home-room activities can be focused on the development and true education of the student members.

<sup>8</sup> Ruth Fedder, *Guiding Homeroom and Club Activities*. New York: McGraw-Hill Book Co., Inc., 1949.

## EVALUATING THE CORE CURRICULUM: A FURTHER LOOK

BERTIS E. CAPEHART, ALLEN HODGES,  
AND ROBERT ROTH

*Oak Ridge Public Schools, Oak Ridge, Tennessee*



OBJECTIVE EVALUATIONS of core-curriculum programs are still very much needed to provide evidences that the goals claimed for these programs are achieved. A search made by the writers of this article reveals that few evidences of this achievement have been reported in objective studies.

Kelley and Beatty<sup>1</sup> reported that the basic skills can be adequately taught, and the gain in learning measured, in a core program. However, their study was concerned with a core curriculum in a junior high school enrolling Grades VII-IX. Wright<sup>2</sup> summarized reports of objective evaluation and pointed out that only two controlled experiments to determine the effectiveness of the core curriculum had been conducted: one, at the Midwood High School, New York City, was reported by Wrightstone and Forlano;<sup>3</sup> the other, at the Oak

Ridge, Tennessee, high school, was reported by the present writers.<sup>4</sup> In both these experiments greater gains were reported for the experimental core groups than for the traditional non-core groups.

In her survey Wright concludes:

Programs of evaluation of the core curriculum are needed to provide evidence that the claimed outcomes are realized. Many of these outcomes concern intangibles difficult to evaluate. When educators can point to improved social attitudes, better civic behavior, equal or improved competence in basic skills, plus information or knowledge of the type needed by everyone, a wide acceptance of the core curriculum will be assured.<sup>5</sup>

### THE CORE PROGRAM AT OAK RIDGE

The core program at the Oak Ridge High School is optional at the tenth-

<sup>3</sup> J. Wayne Wrightstone and George Forlano, "Evaluation of the Experience Curriculum at Midwood High School," *High Points in the Work of the High Schools of New York City*, XXX (December, 1948), 35-42.

<sup>4</sup> Bertis E. Capehart, Allen Hodges, and Norman Berdan, "An Objective Evaluation of a Core Program," *School Review*, LX (February, 1952), 84-89.

<sup>5</sup> Grace S. Wright, *op. cit.*, p. 100.

<sup>1</sup> Arthur C. Kelley and Robert E. Beatty, "Here's Proof that Core Program Students Learn Basic Skills," *School Executive*, LXXII (February, 1953), 54-55.

<sup>2</sup> Grace S. Wright, *Core Curriculum Development—Problems and Practices*. Federal Security Agency, Office of Education Bulletin 1952, No. 5.

grade level.<sup>6</sup> A student who elects to take "Core" receives academic credit in world history and in English II. A student who does not elect to take the core program enrolls in an English II class; he has no opportunity to enroll in a separate world history class, since the demand does not justify the inclusion of world history in the program of studies.

The core organization allows for a larger block of time (two hours a day, five days a week) and is designed to afford greater opportunity for student-teacher planning, more effective guidance, and greater flexibility in organization and procedure. The larger block of time in the core program is believed to provide a greater opportunity for students to acquire skills and knowledge, to develop the faculty of critical thinking, to acquire more effective work habits and study skills, to improve their personal and social adjustment, to broaden their interests in community affairs, and to develop social attitudes and a sense of social responsibility.<sup>7</sup>

#### DESIGN OF THE EXPERIMENT

From a list of goals formulated for the core curriculum, two were selected as fundamental. These goals, which lend themselves to rather objective measurement, are (1) acquisition of

skills and knowledge and (2) development of critical thinking.

It will be readily agreed that the first goal is also a stated purpose of any English II class. The instructional guide of the English II course at the Oak Ridge High School lists, among others, the following purposes:

1. To help students cultivate the habit of listening critically
2. To teach students to participate intelligently and politely in oral discussion
3. To develop students' creative talent
4. To teach students to use the library effectively
5. To encourage students to form the habits of accuracy, conciseness, and neatness

Since these are related to the development of critical thinking, it appears that the purposes of the English II class at the Oak Ridge High School do not differ radically from the goals of the core class.

#### EVALUATION

In the Oak Ridge schools, evaluation of student gains from core programs is not limited to written examinations and objective tests. In reality, many different kinds of evidence on student behavior are collected. Records of student activities, interviews and conferences, check lists, questionnaires, anecdotal records, sociograms, student-devised instruments, records of students' work, and a variety of other instruments and devices are used, because valid judgments cannot be made on standardized-test data alone. However, objective data of the kind presented in this study do have

<sup>6</sup> For a more complete description of the core program at other grade levels see Bertis E. Capehart, Allen Hodges, and Norman Berdan, *op. cit.*

<sup>7</sup> Oak Ridge Schools' Staff, "Curriculum Improvement Report," May, 1952. Pp. 455 (mimeographed).



value in helping us become better informed about academic achievement in core classes.

After an earlier attempt to evaluate objectively the core program, it was recommended that achievement, as set up from a list of goals formulated for the core at the tenth-grade level, should be measured in control (non-core) and in experimental (core) groups. From the standpoint of time, money, and effort expended in very elaborate testing programs, the decision was reached to select only the two goals mentioned previously for evaluation by standardized tests. The tests selected for use were the Cooperative English Tests and the Watson-Glaser Critical Thinking Appraisal.

The data reported in this study were obtained during the twelve-month period from May, 1951, to May, 1952. Students enrolled in the core program were matched individually with students enrolled in the regular curriculum as of May, 1951, on the basis of pretest performance. The following variables were controlled: (1) teacher differences, (2) sex of subjects, (3) chronological age, (4) intellectual ability, (5) total English ability, as measured by the Cooperative English Tests, and (6) critical-thinking ability, as measured by the Watson-Glaser Critical Thinking Appraisal.

The first variable, teacher differences, was controlled by the fact that for the 1951-52 academic year teachers who taught the core program at the tenth-grade level were also re-

quired to teach classes in English II. This fact enabled matched pairs of students to be selected since both the experimental subject and the control subject were taught by the same teacher. Differences in student achievement which might occur as a result of different teachers' personalities, skills, and effective teaching techniques were therefore eliminated by having the teacher acting as a "control" on himself.

There may be some doubt that having the same teacher for both the control and the experimental groups adequately controls the teacher situation. If the teacher is aware of the experiment and if he favors the core program, it may be argued that he will teach the core class with more enthusiasm than he brings to the non-core group. However, the teachers in this study were not aware that an experiment was being conducted.

The remaining five variables were controlled by the matching procedure. In order to determine whether the core group and the non-core group could be considered equivalent in initial ability, a comparison was made between groups, the results being shown in Table 1.

From the data in Table 1 the conclusion may be drawn that in May, 1951, when the pretests were administered, no statistically significant differences existed between the core and the non-core groups with respect to chronological age, intelligence quotient, or total score on the Cooperative English Tests or on the Watson-



Glaser Critical Thinking Appraisal. The core and the non-core groups differed slightly in initial ability as measured by the subtests of the English test, with the differences favoring the non-core group.

After an interval of twelve months, the post-tests were administered. No

two groups on the subtests of the Cooperative English Test on the pretest (May, 1951). On the post-test (May, 1952), the core group achieved more measured gain in all three areas as compared with the non-core group. The mean gains observed were tested for significance by means of Fisher's *t*

TABLE 1  
MEAN CHRONOLOGICAL AGE, INTELLIGENCE QUOTIENT, AND TOTAL TEST SCORES OF  
TWENTY-FOUR MATCHED PAIRS OF STUDENTS IN EXPERIMENTAL  
AND CONTROL GROUPS

	Experi- men- tal (Core) Group	Control (Non-core) Group	Differ- ence	Standard Error of Mean Differ- ence	<i>t</i> *	Probability
Chronological age (May, 1951) ..	15.04	15.04	.....	.....	.....	P>.9
Intelligence quotient (Primary Mental Abilities Test), May, 1951.....	108.00	108.71	0.71	0.92	0.81	P>.5
Cooperative English Tests:						
Form Rx, May, 1951.....	40.62	42.04	1.42	1.40	1.01	P>.3
Form S, May, 1952.....	45.88	46.67	.79	1.61	.49	P>.6
Watson-Glaser Critical Thinking Appraisal:						
Form Am, May, 1951.....	61.04	60.58	.46	1.16	.39	P>.7
Form Bm, May, 1952.....	65.79	62.42	3.37	1.67	2.02	P>.08†

\* Quinn McNemar, *Psychological Statistics*, pp. 73-75. New York: John Wiley & Sons, Inc., 1949.

† Probably significant.

clearly significant differences were found to occur between the two groups. On the Watson-Glaser Critical Thinking Appraisal, the gain exhibited by the core group differs from the gain of the non-core group at the 8 per cent level of confidence, which may be considered "probably significant."

Table 2 contains the subtest scores of the Cooperative English Tests, comparing the mean gains exhibited by each group. Differences in initial measured ability occurred between the

and were found to be of no statistical significance.

#### INTERPRETATION OF TEST RESULTS

The results suggest that, with regard to growth in English skills, the core curriculum is equivalent to the more formalized method in producing the desired learning. Claims for the superiority of one method over the other in the teaching of English skills are not verified by this study. Critical-thinking ability, however, appears to be stimulated to a greater degree with-

in the core curriculum. While this conclusion is not clearly significant statistically, results obtained suggest that this difference might be labeled "probably significant."

As in the previous study reporting an evaluation of a core program, the differences in learning which occur as a result of these two methods are unanimously in favor of the core program. If a larger number of subjects could have been obtained, it is felt that the differences noted would have shown statistical significance in favor of the core approach. Also, all the students in the study had participated in

by the core group in this study in comparison with the gain of the non-core group.

On the basis of the findings, the following hypothesis is made:

The major advantage of the core over the non-core approach is that the core program appears to further develop critical-thinking ability. Subjectively, the motivation of the student appears as the basis on which this advantage occurs.

#### SEX DIFFERENCES IN CORE LEARNING

Under the rigorous matching procedure applied to the previous portion

TABLE 2  
MEAN SCORES AND MEAN DIFFERENCES BETWEEN SCORES EARNED BY TWENTY-FOUR  
MATCHED PAIRS OF STUDENTS ON INITIAL TESTS (MAY, 1951) AND FINAL  
TESTS (MAY, 1952) IN DIFFERENT AREAS OF ENGLISH SKILLS

SUBTEST OF CO- OPERATIVE ENGLISH TESTS	CORE GROUP			NON-CORE GROUP			DIFFERENCE IN MEAN GAIN OF CORE OVER NON- CORE
	May, 1951, Score	May, 1952, Score	Differ- ence	May, 1951, Score	May, 1952, Score	Differ- ence	
Mechanics of expres- sion.....	40.13	45.13	5.00	42.00	46.13	4.13	0.87
Effectiveness of ex- pression.....	41.00	48.50	7.50	42.58	47.83	5.25	2.25
Reading comprehen- sion.....	43.58	48.25	4.67	42.96	46.29	3.33	1.34

a core situation in Grades VII-IX. Therefore, if, in fact, core classes develop critical thinking, all these students—those in the experimental and in the control groups—should have this ability as the result of their three years' experience with the core curriculum in junior high school. This rules out the possibility of a large gain

of the study, a number of core subjects of both sexes had been excluded. In order to test the possibility that sex of a student is a basic factor in the reputed gains obtained by the core group as compared to the non-core group, all students who were enrolled in the core program were divided according to sex. At the beginning of the

exposure to the core program, chronological age, measured intellectual ability, measured English skills, and measured critical-thinking ability of the boys and girls were equivalent, as shown in Table 3.

Table 3 also contains the post-test data, obtained in May, 1952, after a complete year's study in the core

#### SUMMARY AND CONCLUSIONS

Utilizing the matched-pairs technique and controlling such variables as sex, chronological age, intellectual development, initial English ability, and initial critical-thinking ability, twenty-four pairs of high-school students were selected as subjects of this study. Within each pair, one student was en-

TABLE 3

MEAN SCORES AND MEAN DIFFERENCES BETWEEN SCORES EARNED ON INITIAL TESTS (MAY, 1951) AND ON FINAL TESTS (MAY, 1952) BY THIRTY GIRLS AND THIRTY-EIGHT BOYS IN CORE PROGRAMS

	Girls	Boys	Difference	<i>t</i> *	Probability
Chronological age (May, 1951).....	15.35	15.45	0.10	0.02	P < .9
Intelligence quotient (Primary Mental Abilities Test), May, 1951.....	99.00	99.58	.42	.04	P < .9
Cooperative English Tests:					
Form Rx, May, 1951.....	36.60	36.57	.03	.01	P < .9
Form S, May, 1952.....	40.60	42.26	1.66	.53	P > .6
Watson-Glaser Critical Thinking Appraisal:					
Form Am, May, 1951.....	57.83	60.89	3.06	1.20	P < .2
Form Bm, May, 1952.....	58.00	62.42	4.42	1.30	P > .1

\* Fisher's *t*. Palmer Oliver Johnson, *Statistical Methods in Research*, p. 72. New York: Prentice-Hall, Inc., 1949.

classroom. On the basis of the findings, sex of subjects does not appear to affect achievement within the core-type curriculum. Some speculations have been made by the writers that the core program, with its greater flexibility, its subject matter more "central" to pupils' interests, and its emphasis on individual research (a form of independence), might appeal more to adolescent boys than to girls of the same chronological age. This "hunch" does not appear to be justified on the basis of the comparisons made.

rolled in the core curriculum while the other student was enrolled in the regular subject curriculum of English.

All the students enrolled in the core program were, in another part of the study, divided according to sex. As of May, 1951, when the pretest battery was given, no significant differences were found between the matched groups or between the groups of boys and girls as to total measured English ability and measured critical-thinking ability.

After an interval of twelve months,

the groups were given the post-test battery. The following results were obtained:

1. Students enrolled in the core curriculum made "probably significantly" greater gains in the area of critical thinking than did students not participating in the core curriculum. The mean difference of 3.37 points in gain on the Watson-Glaser Critical Thinking Appraisal is significant at the 8 per cent level of confidence.

2. Students enrolled in the English II classes did not make significant gains over the core group of students in English skills. In fact, the mean gain differences on pretest and post-test scores showed that the core students gained at a greater rate than did the students in the English classes.

3. The gains of the students in the core group on each of the three subtests of the Cooperative English Tests are consistently higher than the gains for the non-core group. It was noted that particular gains were made by the core group on that part of the Cooperative English Tests concerned with "effectiveness of expression," a fact which substantiates the findings of the previous study.<sup>8</sup>

4. The sex of the students does not appear to influence achievement in the core curriculum.

#### IMPLICATIONS

There is some implication from the results of this study and the previously reported Oak Ridge study that students in a core program learn basic skills with equal or improved competence. This study also suggests that our traditional teaching methods do not lead to much improvement in skills of critical inquiry, such as interpretation of data, evaluation of arguments, deduction, and recognition of assumptions or inferences as measured by the Watson-Glaser tests. On the other hand, the study does give factual evidence that the core approach to teaching is effective in teaching pupils how to think.

More research of this type in many different school systems concerned with evaluation of these many intangible learnings is vitally needed if advances are to be made in teaching methods and curriculum revision.

<sup>8</sup> Bertis E. Capehart, Allen Hodges, and Norman Berdan, *op. cit.*

## TEACHING SCIENTIFIC METHOD IN A UNIT ON BACTERIAL DISEASE

JAMES J. THOMPSON

*Central High School, Newark, New Jersey*



MUCH has been written about the need to develop in children an understanding of the scientific method and an ability to reason scientifically, but little has been written about the methods for doing so. Deliberate training in reasoning and in original thought is of inestimable value both to the student himself and to society. The student will find that his later success may depend to a large extent upon his ability to solve the problems which will confront him in his daily life and occupation, and society reaps the benefits, directly or indirectly, of the ability of its members to think clearly and to distinguish truth from error.

Teachers of natural science realize that their subject is essentially one which makes use of reason. Scientific knowledge inspires confidence because it has been established by the most painstaking investigations, by the most careful observations and experiments, and by critical reasoning, with every conclusion or theory subjected to the most rigid tests. Yet, although the sciences should be the least dogmatic of all subjects in the elementary and high schools, the

teaching of science is often fully as dogmatic as that of other subjects. The child is given the conclusions of science ready-made and is offered little or no evidence. He is told that the earth, which appears to be still, is moving around the sun; that things are composed of atoms; that atoms contain electrons, protons, and neutrons; that oxygen is used in breathing; that North America was once covered by glaciers; that heating a material speeds its molecules; that diseases are caused by bacteria; that radio programs are sent by waves; that chalk was formed from animal shells in the sea. No attempt is made to appeal to the child's developing reason, to make the statements consistent with experience, or to indicate how such things were ever found out. To the child, science is mystery, and its ways are beyond comprehension. "Research" means looking in other books. An "experiment" is a step-by-step imitation of an activity described in a textbook, not an invented course of action for discovering the unknown.

Perhaps this is so because the conclusions of science have largely been irrefutably established, and for lay-



men or students to express opinions about them, even about questions still unsettled, is regarded as foolhardy. Perhaps it is so, too, because methods of teaching which do full justice to the true spirit of science have not been developed.

In an effort to develop the scientific method of teaching, units like the one on bacterial diseases described herein have been used during the past two years in senior high school classes in biology at Central High School, Newark, New Jersey.

The conventional presentation of the subject of bacterial diseases, such as is usually found in biology textbooks, describes bacteria and tells the child that bacteria cause various diseases, that bacteria produce certain poisons or toxins, and that body defenses against disease include anti-toxins and other antibodies. This is all material for memorization; it does not achieve the desired objective of developing the scientific method of reasoning to estimate the validity of the scientific evidence and to detect flaws in it.

Since the major goal of teaching these units is to instil in students a functional understanding of the scientific method, the teaching procedure explains not only what scientists have discovered but also how they discovered it. It discloses the methods of reasoning and of procedure which have actually been used in discerning truth, and it traces the development of scientific knowledge and presents the evidence for it. No statement is made

without indicating to the student the evidence upon which it is based. This presentation requires the students to criticize and compare scientific theories.

The unit offered here is intended as but a sample; the writer has developed similar methods of instruction for use with other science topics in other grades. For the sake of brevity, only the middle portion of this sample unit is reported at length; the earlier and later portions are briefly summarized. The unit, which is one of eight included in the course, requires nineteen days of teaching.

In these units the research histories are presented orally by the teacher. As far as the writer knows, they do not now exist in any readily available and convenient printed form. The historical studies in science upon which these units are based were begun as early as 1935. They embrace not only biology but all sciences.

#### THE FIRST SEVEN DAYS'

##### WORK IN THE UNIT

In the first seven days of the unit, the information suggested by the following outline was covered:

- A. Story of first discovery of bacteria and proof that bacteria are living
  - 1. Pasteur's theory that fermentation is caused by yeast, that souring is caused by bacteria
    - a) Alternative theories of Stahl, van Helmont, Fabbioni
    - b) Corroborating research of Lavoisier, Thénard, de Latour, Schwann
    - c) Opposition of Berzelius, Wöhler, and von Liebig

- d) Did Pasteur really prove his theory?
2. Pasteur's study of silkworm diseases
  - a) His collection of facts
  - b) Invention of his theory
  - c) His mistake
3. Koch's studies
  - a) Discovery of anthrax spores
  - b) Invention of effective techniques of bacteria culture on solid media
  - c) Discovery of tubercle bacillus
  - d) His postulates
4. Pasteur's discovery of methods of immunizing:
  - a) Chickens against chicken cholera
  - b) Sheep against anthrax
5. Development by Pasteur, with Roux, of cure for hydrophobia
6. Jenner's discovery of vaccination against smallpox

The further work of the unit is now described in detail.

#### THE WORK OF THE EIGHTH DAY

On the eighth day the class saw on the blackboard the following statements:

1. Bacteria eat tissue (Koch).
2. Bacteria eat a tissue substance (Pasteur).
3. Bacteria excrete substances poisonous to themselves (Chauveau).
4. Bacteria excrete substances poisonous to tissues (Löffler).
5. Blood contains an antiseptic (Buchner).

The following is a summary of remarks made by the teacher at that time.

We have learned how Pasteur, Koch, and others proved that bacteria cause disease. We will now seek to answer the questions, "What do bacteria do that causes disease and death?" "How can a tiny speck kill an organism like a person, which is a billion times larger than itself?" On the board are five theories. You will analyze and criticize

each of them in your minds, and tomorrow you will criticize each of them in class. I shall explain each theory in detail.

First, what is a theory? How does it differ from a fact? [Develops the answer that facts are sense data, theories are guessed-at explanations.]

Now, when is a theory a good theory? [Develops the answer that a theory is good when it explains all the known relevant facts, is not contradicted by any of the facts, can be tested experimentally.]

I will now explain the theories.

*Theory I.*—Koch discovered the tubercle bacillus. He knew the fact, discovered by Morgagni, that in tuberculosis the lung tissue is altered by the formation of tubercles. The function of breathing must therefore be interfered with. He theorized, therefore, that bacteria must produce death by consuming vital body tissue. The names "tuberculosis consumption," "consumption," and "consumptive" attest to belief in the theory that bacteria consume the living body just as they use for food and decompose a piece of meat left exposed on a dish. A person recovers if his body is in good general health and can repair the tissue faster than the germs consume it; if not, he dies.

*Theory II.*—Pasteur felt that bacteria consume some substances necessary to their sustenance, of which the body has but a limited quantity. When this substance is exhausted, the bacteria die, being thereby starved, and the patient recovers. If this substance remains lacking, the person is immune, for new bacteria entering the body will not find in it the substance they need for their food.

*Theory III.*—Fermentation of wine stops when the alcohol reaches a concentration of 15 per cent. Wines with more alcohol have to be "fortified." Evidently, the yeast cannot live or be active in its own excretions. Alcohol inhibits the life and activity of microorganisms. So in the body. Bacteria give off excretions, which, in sufficient concentrations, are poisonous to themselves. The bac-

teria die, and the patient recovers. As long as these excretions are retained, the person is immune, since new bacteria of the same kind cannot live in him.

*Theory IV.*—Bacteria give off excretions which are poisonous, not to themselves, but to the tissues of the body. These poisons must be picked up and distributed throughout the body by the blood. Certain vital organs are poisoned by these substances, and they consequently cannot function normally. Thus are produced sickness and death.

*Theory V.*—It was shown by many that blood is bactericidal (experiments on rabbits, the work of Fodor, of Nuttall, and of Buchner). Buchner theorized that the blood must contain an antiseptic which he proposed to call "alexin." This antiseptic is produced upon invasion of the body by germs; if produced faster than the germs grow, the patient recovers; if not, he dies. The retention of alexin by the body renders it immune.

I will now answer any questions about the theories, the standards for your criticisms of them, or your assignment. Be sure you have the five theories copied in your notebooks.

#### THE WORK OF THE NINTH DAY

Paper was distributed, and the students were asked to answer the following questions:

1. Criticize each of the five theories according to the rules developed yesterday.
2. Does it really make any difference which, if any, is true? Will people not suffer disease and death, will not certain remedies and cures be effective, whatever the explanation is? Is not everyone entitled to his own opinion?

A written rather than an oral criticism was requested because many students are content merely to sit and listen or to amuse themselves and, even when asked their opinion, decline to answer; and also because the

teacher wanted a permanent record of the students' reasonings. The criticism was not given as a homework assignment because it was desired that the answers be individually reasoned, rather than the joint result of many minds or the copied answers of the brighter students, and because many students in unfavorable economic circumstances who work after school consistently fail to submit homework or else submit homework hastily done and of poor quality.

While the students wrote, the teacher went through the classroom examining the work being done by each student and discussing with him anything on the paper which was not perfectly clear.

The papers submitted showed that 58.3 per cent of the students were unable to think of any criticism for any theory. Another 31.4 per cent could think of but one criticism which could be considered logical and valid. Only 10.3 per cent of the replies mentioned two or more strengths or defects of any of the theories. However, on the following day, when the students' and teacher's criticisms were assembled on the blackboard, a number (not counted) of students who had not been able to think of anything to write "got the idea," and expressed criticisms orally. The writer concludes that nothing in the students' earlier education ever taught them to think in this way; that they were not "used to it" but could learn; and that encouragement of scientific thinking should begin much earlier, as early as the primary grades.

Sixty-one per cent of the pupils felt that, if the correct theory of disease were known, it should help in cure and prevention; 36 per cent maintained that it makes no difference; 3 per cent failed to answer the second question.

#### THE WORK OF THE TENTH DAY

On the tenth day the students' and teacher's criticisms of the theories were assembled on the blackboard as follows:

##### A. Theory I

1. It explains disease and death.
2. It does not explain:
  - a) Why only some, not all, bacteria cause disease. Shouldn't any bacteria that can decompose meat also be able to decompose living tissue?
  - b) Why death can result from infection of a nonvital organ, such as infection of the hand through a cut, or appendicitis. Even in tuberculosis, the disease on which Koch based his case, a person may die if only one lung is involved; yet a person can live with one lung completely removed.
  - c) The theory purports to explain recovery, but it really does not. On this theory, the germs would still be alive in a recovered person; there is nothing that gets rid of them. The production of new tissue would only feed them better, until bacteria possessed the entire body.
  - d) Tissue destruction should be visible in certain organs, such as the hand. On this theory the hand should be consumed, skeletonized, the consumption should travel up the arm, while the patient still lived; and death should not result until the bacteria ate their way to some vital organ, such as the heart or lungs.

- e) It does not explain that curious phenomenon, immunity.

##### B. Theory II

1. It explains recovery and immunity.
2. It does not explain:
  - a) Why the substance is in the body in the first place. Does the body contain it only to feed germs for a while? Or is the substance necessary to proper body function? Is an immune person permanently impaired in some way?
  - b) The specific nature of disease and immunity: a person immune to smallpox, for example, is not thereby immune to typhoid fever. On this theory, the body should contain at birth as many such different bacteria-feeding substances as there are human diseases.
  - c) The most important fact of all: death. The theory gives no indication of why a person even becomes sick.

##### C. Theory III

1. It explains:
  - a) Recovery.
  - b) Specific nature of immunity.
2. It does not explain disease and death.

##### D. Theory IV

1. It explains:
  - a) Disease and death.
  - b) Death due to infection of a non-vital organ.
  - c) Specific nature of disease. (Different diseases affect different organs of the body.)
2. It does not explain recovery and immunity.

##### E. Theory V

1. It explains recovery and immunity.
2. It does not explain:
  - a) Disease and death.
  - b) The specific nature of disease. There cannot be only one alexin, but there must be a different alexin for each disease.

The students then attempted to secure a good theory out of various combinations. They agreed that, by adding together Theories I and II, they would add not only their respective advantages but their weaknesses also and that many things would still be explained imperfectly or not at all. They agreed that Theories III and IV could not be combined, for the truth of one would deny the other; one could be true and the other false, or both could be false, but both could not be true. For if the substance supposed by each theory is the same substance, an immune person would have to carry within him a poisonous substance capable of sickening and killing him.

The students concluded that none of the theories is satisfactory and that the exact action of bacteria in the body is doubtful. Some students suggested observations and experiments which might be used in testing various theories.

#### THE WORK OF THE ELEVENTH DAY

The following remarks summarize what was said by the teacher on the eleventh day.

Today's lesson considers diphtheria. At one time the disease was deadly, with a high mortality among children. Bacteria shaped like tenpins were discovered by Klebs in the throats of children with diphtheria.

Löffler developed a stain for these germs. (Where before have we heard of Löffler?) He was puzzled by finding these germs in throats of healthy children. We now know that these children must have been immune. He proved, by Koch's methods, that the germs do cause diphtheria [proof was given].

He attempted to find them in the body. In children, they are nowhere except in the throat; in experimental animals, nowhere except at the point of injection. Yet they produce paralysis in the legs. Why? How can they paralyze the legs without being there? Where an effect is, must not the cause be present also?

The students suggested that this must have been the reason why Löffler theorized that bacteria excrete a poison absorbed and carried by the blood.

Löffler named the theoretical poison "toxin." He could think of no way to find the poison or to prove his theory.

Yersin and Roux, to test Löffler's theory, sought to filter the tenpin germs away from the broth in which they grew, with the idea that, if the germs excrete a poison, it becomes part of the broth and the broth alone should then produce the disease without the germs. Filtration was difficult, and they finally invented a filter consisting of an unglazed porcelain cup and means for exerting pressure, with compressed air, upon a liquid confined within it.

Yersin and Roux tested the filtered liquid on solid media to assure themselves that it was sterile. They then administered it to animals [test was given]. At first they met with failure. [Early failures and the reasons were described.] Then they succeeded. [Their final success was described.] The broth, without the germs, caused death with all the symptoms of diphtheria. Löffler was right!

#### THE WORK OF THE TWELFTH DAY

On the twelfth day the teacher made the following remarks:

A method of producing immunity to diphtheria was developed by von Behring. He also invented a theory to explain immunity. He conceived an antitoxin theory, which he proved experimentally. [Theory and proof were explained.]



Roux conceived the idea of producing antitoxin in horses. [His methods for developing techniques for doing this, the difficulties he encountered and how he overcame them were described.] He ended an epidemic of diphtheria. Hundreds of thousands of children's lives have been saved by this research. [The effectiveness of the antitoxin in horse serum; modern production of antitoxin; the toxin-antitoxin immunization treatment; the Schick test; present extent of immunity; and present incidence of diphtheria were all described and discussed.]

#### THE WORK OF THE THIRTEENTH DAY

On the thirteenth day a written test on diphtheria research took up half the period. After the papers were collected, the outcomes of learnings thus far were discussed.

The following is a summary of the teacher's remarks:

You were once asked whether it made any difference which of the five theories is true. What do you think now?

The class voiced the opinion that it certainly makes a great deal of difference, for with the truth you can do things, while without it, you can do nothing. The class seemed to have a greater respect for the value of truth in scientific speculation.

Truth has not always been so regarded. In the Middle Ages, the voice of authority prevailed. You learned when we studied human anatomy that the writings of Galen were supreme and unchallenged for twelve centuries, until Vesalius ventured to dissect the human corpse and to expose the errors of Galen. As in this, so in other fields. Throughout the whole history of science, there have been many cases in which the first explanation to be proposed has been adopted universally and has misled subsequent scientists

for generations. There have been many different theories of the atom, and if the earliest theories had been accepted without question, we would not today have atomic energy.

Do you understand better how scientists work?

The students contributed their impressions of the ways by which facts are learned; of how theories are suggested to the mind; of how a theory is to be appraised; of how a means of testing a theory may be invented; of what justifies conclusions; of how practical applications of knowledge may be envisioned.

Do you see any advantage in the presentation I have used, of going back into the history of the subject, and of seeking evidence, over the direct presentation such as that of the textbook?

Would you be interested in bacteriology as a career?

The students replied that they preferred the method here used; that they understood toxins and antitoxins better; that they would like to learn to match their wits with those of great scientists; and that anyone contemplating research in bacteriology as a lifework would be greatly helped by knowing the procedures that were successful in the past. The students asked about the amount of study involved for a career in bacteriology and the pay. One stated that the satisfaction of contributing to the preservation of human life would be worth more than pay.

#### THE WORK OF THE LAST SIX DAYS

The unit was concluded by presentation of how the body gets rid of bac-

teria as it recovers, of the researches and discoveries of Metchnikoff, contradictory theories, Pfeiffer and the discovery of bacteriolysis, discovery of agglutination by Widal, Charrin, and Roger, Kraus and precipitation, uses of the precipitation reaction, filterable viruses and virus diseases. This material required six days to present.

#### LABORATORY WORK

At present, laboratory work is limited to the ordinary high-school biology work, such as yeast fermentation, agar cultures, and microscopic observations of bacteria. There are also bacteriological studies of the chlorination of water and the testing of chlorine residuals. What is planned for the future is original investigation by the students, for which they do not know answers in advance, such as (in this unit): "What causes diseases in fruit, for example, rotten apples?" The students will pattern their researches after those of Pasteur, Koch, and others who investigated diseases of human beings, but in their investigations of diseases of fruits they will devise their own theories and procedures and find out whether bacteria are involved, how such diseases are acquired, whether these diseases are contagious among apples, whether the bacteria penetrate the unbroken skin, and similar facts and hypotheses.

#### CONCLUDING COMMENT

A new unit method of teaching science, which attempts to impart to students a functional understanding of the scientific method, has been described.

It is true that teaching of this type, involving presentation of actual research methods by which the data of science were learned and evaluation of the evidence upon which scientific knowledge rests, requires more time than a simple statement that "bacteria produce toxins and the body produces antitoxins to counteract them." But, since the teaching is aimed not only at the giving of information but also at training in scientific thinking, the additional time required for its accomplishment is justified.

That the method is successful is evidenced by the changes in the students' attitudes: the realization that knowledge of scientific truth enables man to make practical applications of knowledge (in this case, it has enabled him to make progress in his constant fight against disease); that discovery of the truth is achieved by a regular method of thinking; and that this method requires painstaking observation and experiment for the collection of relevant facts, and the subjection of theories to crucial tests which demonstrate their truth or falsity.

## THE BAVARIAN TEACHER-TRAINING PROGRAM

GEORGE A. C. SCHERER

*University of Colorado*



A BRIEF DESCRIPTION of the current training program for secondary-school teachers in another land, namely, the South German State of Bavaria, is offered in this paper. During the spring and early summer of 1952, I had the opportunity to examine the Bavarian plan at first hand, particularly in the regions of Munich and Nuremberg, and to study the state regulations governing teacher training. Although I was specifically interested in the program for the modern foreign languages in Germany, the discussion to follow applies in virtually all respects to practice teachers destined for any teaching area in the German secondary school.

### BACKGROUND OF TEACHER-TRAINING CANDIDATES

The candidate for teacher training in Bavaria has behind him many years of specialized study. In the foreign languages, at least, the candidate is in full command of his subject. He is fluent usually in two languages that are foreign to him, which are for the most part French and English. The only miracle operating in bringing about the student's fluency is time: six to nine years of foreign-language

study before entering the university and at least four additional years of study in the university. Add to this a couple of trips to France and England and one has a linguist.

It should be said at the outset that many of the candidates for teacher training have already completed the doctoral program in one or more subject fields at a university. Actually, the state of Bavaria requires only that eight semesters of university study shall have been completed at the time of application for teacher training. However, any person desiring to learn to teach is required to pass a thorough Bavarian state examination in his subject areas before he can be considered for candidacy. No more than two years may have elapsed between the passing of this examination and admission to the teacher-training program.

### THE MEDICAL CERTIFICATE

Among the other requirements for admission there is one of special interest: the medical certificate. The candidate must present a physician's testimonial of recent date stating that he is physically and mentally fit for the teaching profession. Special atten-

tion is given to sight and hearing and to tendencies toward chronic illnesses. Chest X rays for pulmonary diseases are also required.

The timing of the medical examination is especially fortunate. Known medical misfits can be refused entrance to the expensive teacher-training program. I point this out because this educational problem is currently much discussed in the United States. Nonetheless, many German educators are still worried about the fact that some physically or mentally unfit manage to get into the teaching profession. School administrators in Germany are working on the problem, but they feel that a completely satisfactory solution will be difficult to achieve.

#### THE PEDAGOGICAL SEMINAR

German universities do not offer programs in education. Here and there a professor may offer a course that applies, but for the most part the universities consider teacher training to be none of their business. Instead, the ministries of education of the several states designate certain secondary schools within each state at which the teacher-training program is to be carried out. These secondary schools either are located within cities having a state university or are in the vicinity of a university town. The programs are referred to as "pedagogical seminars." All applications are made with the state ministry of education, and this body makes all decisions regarding candidacy. Once accepted, the candidate is expected to devote full

time to his training for the period of one full school year.

Needy students have the opportunity to apply for a subsidy. The amount granted varies in accordance with the need of the student, but it is never large. State subsidies for trainees in secondary-school teaching are unknown in the United States. At best, we can compare this German practice only with the scattered aid sometimes rendered by local parent-teachers' associations when there is a dire need for teachers.

It is made quite clear that, if the seminar director considers a candidate to be unsuited for the teaching profession, he may dismiss him. The reasons for dismissal are available to the candidate at the ministry of education. This, of course, implies a review of the candidate's case by the higher authority. Questionable conduct or inadequate performance are the usual reasons for dismissal.

The principal of the school designated for teacher training is automatically the director of the pedagogical seminar. However, with the approval of the ministry, he may assign his duties, in part or *in toto*, to a qualified representative. The candidates for teacher training are grouped according to their subject interests, and individual seminars are set up. An experienced teacher on the permanent staff of the school is then assigned the seminar work in a specific subject field as a part of his teaching duties. The reduction in regular load varies with the number of practice teachers enrolled.

The director of the seminar program is responsible to the state ministry of education for the conduct of the program. In collaboration with the seminar teachers, he sets up the working schedule and periodically checks the progress of the individual seminars. He is the chief adviser of all practice teachers, and he frequently visits their classes. Occasionally he calls all seminar teachers together for deliberations on the training program.

It is the task of the seminar teachers to instruct the candidates in the teaching aims and methods of the field concerned and to supervise closely their practice teaching. Actually, any teacher in the school, if called upon, is obligated to co-operate in the job of training teachers, but many of the teachers are hardly touched by the program except for the frequent visitations of their classes by the candidates.

The training of the prospective teacher begins with one to two weeks of observation in classes selected by his seminar instructor. An attempt is made to see that he visits some classes at all levels of instruction. The visits are not limited to the special subject fields of the candidate. It is hoped that the student will acquire from these early visits a feeling for the pulse of the school.

Following the initial period of diversified observation, the members of the seminar are asked to visit the classes of their seminar instructor, particularly those of his classes in which they are to make their first attempts at teaching. They are asked to pay special at-

tention to the various procedures employed by the instructor.

After another week has passed, the students begin practice teaching. In the initial stages a student is allowed only a portion of the regular period, but the matter to be treated is one that has a certain unity—a beginning and an end. Depending somewhat on the progress made, he is then intrusted with whole instructional periods and eventually with a series of successive periods. After approximately three months he is assigned a maximum of six weekly hours of regular teaching.

At first the young pedagogue teaches exclusively in the presence of his seminar teacher and the remaining members of the seminar. Later he is permitted to work with his pupils without constant and direct supervision. It is realized that he needs an opportunity to establish a personal relationship with his classes and that he must learn to face and solve the problems of discipline. The seminar teacher makes periodic checks to ascertain whether the beginner has matters under control.

#### METHODS OF EVALUATION

In the regular seminar meetings a great portion of the available time is devoted to discussions of the new teachers' successes and failures. Since every member of the seminar is present for his classmates' early attempts at teaching, these discussions become quite lively. It might be said here that German students are less reluctant than our students to criticize the failings of their classmates.



Much stress is put on effective speech. An outside specialist in speech is employed on a part-time basis and put at the disposal of the practice teachers in all fields. Foreign-language teachers are urged to take advantage of all opportunities to improve their command of the foreign tongue.

After the candidates have become somewhat accustomed to the routine of independent teaching, they are subjected to a series of trial lessons (*Lehrproben*). These trial lessons are really hour-long examinations in which the new teacher is carefully observed by all his classmates, by the regular teacher of the subject concerned, by the seminar teacher, and optionally by the director of the entire seminar program. The material to be taught during these special hours of trial is assigned several days in advance. The early trial lessons are held in classes with which the candidate has become familiar through his earlier practice teaching. Later on, he is subjected to trial lessons in classes that are completely new to him. Each trial is subsequently thoroughly discussed by all visitors, and the members of the staff record marks for the performance. Such marks form an important basis for the final evaluation of the student.

#### OTHER PRACTICES

During the second half of the school year the candidates, while continuing to teach, are expected to audit a great many classes in their own subject as well as in other subject fields. In order to broaden their familiarity with various methods as much as possible, they

are even sent to other schools of various types as auditors. The ministry of education is especially interested in having the candidates for secondary-school teaching visit classes in various elementary schools. Furthermore, the candidates are required to take part in extra-curriculum activities, of which, by the way, there are not very many in a German high school.

Throughout the year there are weekly seminar meetings of one or two hours under the leadership of the seminar teacher, that is, the subject specialist. During the first half of the year a great deal of time must naturally be devoted to the practical problems of classroom teaching.

As time permits, the seminar teacher familiarizes his group with the most important literature on the teaching methods of the field. The leading periodicals are constantly kept in the foreground, and many reports on special readings are made by individual students. The students are responsible for the minutes of the meetings, and these records are eventually filed with the ministry of education. Since the war, much stress has been placed on student participation in discussions, and I can testify that efforts in this direction have succeeded amazingly well. Also, every student is required to write a long term-paper on a topic in the methodology of his subject field or in the broader field of educational theory.

The proper use of audio-visual aids receives some attention, but it must be said that very little equipment is in evidence and that there is usually

little money available for slides, films, and other equipment.

In addition to the weekly seminar meetings mentioned previously, there are two-hour weekly meetings for the practice teachers in all subject fields. These general sessions are conducted by the principal or by his appointed representative. The main objective here is to introduce the prospective pedagogues to general educational theory. Some favorite topics are: universal principles of teaching, structure of the school system, current theories on school reform, the task of the secondary school, educational psychology, history of education, and civil service laws.

#### THE FINAL EXAMINATION

The final examination of the candidates is something to behold. I should like to mention just one aspect of the total ordeal. Each candidate, as a part of his examination, teaches three classes in the presence of an examining committee: the regular teacher of the course, the seminar teacher, the director of the program, and a representative of the ministry of education. Each of the three classes is at a different level—lower, medium, and upper—and one of them must be a class which the candidate has never taught before. He may, however, make one visit to this class previous to his appearance as the teacher. The entire committee evaluates the three performances along with the other phases of the final examination. The mark is of the utmost importance to the candidate. Most of the available positions are civil service

positions, and the ministry of education, in filling them, begins with the A's and usually runs out of jobs by the time the C's are reached.

#### CHIEF DIFFERENCE BETWEEN AMERICAN AND GERMAN SYSTEMS

The chief difference between the American and the German systems of training a teacher is that the Germans allot much less time than we do to general educational theory. German educators, especially those who have visited the United States, frequently comment on this conspicuous difference. Some German educators feel that there is a definite need for more coursework in education, but the Germans are seriously hampered by lack of funds and the universities are apparently not interested in offering a series of courses in education. There can be little thought of expansion in new directions in the German secondary schools as long as so many of their much-needed buildings are still lying around in ruins and as long as many of the buildings in use are in a deplorable state of repair. Incidentally, some of the educational plants house two, and even three, separate schools, which hold forth in turn throughout the day and early evening.

On the other hand, the German practice teacher, as compared with the American, receives a much more thorough training in both the theory and the practice of his special subject fields. In spite of the inadequacy of physical plants, the survivors of the training program know their subject and know how to teach it to others.

## SELECTED REFERENCES ON THE ORGANIZATION AND ADMINISTRATION OF SECONDARY EDUCATION

PAUL B. JACOBSON

*University of Oregon*

ROBERT R. WIEGMAN

*University of Portland, Portland, Oregon*

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THE NUMBER of articles published in the area of secondary-school organization and administration during the year covered by this bibliography precludes listing all those of

merit. The articles that are included are, in the opinion of the compilers, representative of the material published during the twelve-month period from July, 1952, through June, 1953.

### ORGANIZATION

#### JUNIOR HIGH SCHOOL<sup>1</sup>

661. GINGRICH, ROBERT W. "Junior High Occupations," *Clearing House*, XXVII (April, 1953), 460-62.

Shows how occupational information can become an integral part of a junior high school curriculum and offers suggestions to help in setting up a program which provides such information.

662. LEIPOLD, L. E. "Junior High Schools Face These Problems," *Clearing House*, XXVII (January, 1953), 263-65.

Presents the most pressing problems facing the junior high schools today, based on the opinions of teachers and administrators in that field.

<sup>1</sup>See also Item 31 (Russell) in the list of selected references appearing in the January, 1953, issue of the *School Review*.

#### JUNIOR COLLEGE

663. FALLON, BERLIE J. "Modernizing Junior College Budget Practices," *School Executive*, LXXII (March, 1953), 86-87.

States that junior colleges must define their objectives in a positive manner which is based upon the needs of the communities served.

664. JACOB, PEYTON. "The Junior College in Georgia," *School Review*, LXI (May, 1953), 290-97.

A rather systematic treatment of the evolution of the junior college in Georgia and a synopsis of the present situation. Developed through data on the "origin, purposes, organization, and control" which are manifested in the emergence of such colleges in this state.

665. JOHNSON, B. LAMAR. "The Advising, Guidance, and Counseling of Junior College Students," *Bulletin of the National Association of Secondary-School Principals*, XXXVII (February, 1953), 19-36.

Indicates the importance of the guidance function in education, especially at the junior-college level. Includes basic principles to follow when setting up a program.

666. KABAT, GEORGE J. "Continuous Education for Varying Needs and Abilities," *Junior College Journal*, XXIII (November, 1952), 154-63.

Points out the importance of changing a philosophy of education as conditions change; also, that a little constructive criticism never did any damage to anyone.

667. KIMPTON, LAWRENCE A. "The Junior College in American Education," *Junior College Journal*, XXIII (February, 1953), 303-5.

Discusses the development of the junior college and shows the relation of these schools to the universities, pointing out that co-operation between the two types of institutions is essential.

668. LINDSAY, FRANK B. "Teamwork between College and Community," *California Journal of Secondary Education*, XXVII (November, 1952), 390-93.

Presents a constructive approach to the tasks facing junior colleges in California, with emphasis on public understanding of what is being attempted.

669. LOMBARDI, JOHN. "Informing the Public about the Philosophy of the Junior College," *Junior College Journal*, XXIII (December, 1952), 215-18.

Cites the special importance of public relations to a new development in education such as the junior college. Relates what the Los Angeles City College has done to build an effective public relations program.

670. PETERSON, BASIL H. "Admission Practices in Relation to Junior-College Education," *California Journal of Secondary Education*, XXVIII (January, 1953), 40-42.

Discusses the problem of admission requirements in the junior college and suggests practices to follow in overcoming such problems.

#### ARTICULATION

671. BLOUGH, GLENN. "Elementary School Science—Implications for High Schools," *Bulletin of the National Association of Secondary-School Principals*, XXXVII (January, 1953), 38-42.

Outlines the present status of, and variations in, elementary-school science education and suggests how high schools could adapt their science programs to fit it.

672. KANDEL, I. L. "The Articulation of Secondary School and College," *School and Society*, LXXVII (February 21, 1953), 122-23.

Presents some of the problems facing colleges regarding articulation and considers the type of high-school system that is most effective in overcoming such problems.

673. NADLER, LEONARD. "A Program of Teacher Exchange," *High Points in the Work of the High Schools of New York City*, XXXIV (November, 1952), 31-33.

Proposes a program of teacher intervisitation to aid in breaking down some of the barriers caused by our complex educational system.

#### VOCATIONAL EDUCATION

674. CIRILLO, ADAM. "Who Is Qualified To Teach the Tools of the Trade?" *High Points in the Work of the High Schools of New York City*, XXXIV (December, 1952), 39-41.

Identifies the needs of students in vocational high schools and attempts to determine training needed by teachers in such schools.

675. FITZPATRICK, EDWARD A. "Continuation Education—Origin and Underlying Philosophy," *Industrial Arts and Vocational Education*, XLII (April, 1953), 119–21.

Presents the philosophy, problems, and practices of a modern vocational school.

676. HOGAN, ANNE M. "Our Vocational Orientation Program," *Journal of Business Education*, XXVIII (December, 1952), 113–14.

Shows the importance of preplanning for field trips and discusses how to organize a vocational-training program which includes field trips.

677. NICHOLS, FREDERICK G. "Leadership Qualifications," *Journal of Business Education*, XXVIII (January, 1953), 140.

Gives thirteen recommendations as to what a supervisor of vocational training should know and be able to do.

678. WEYNAND, JEROME F. "Vocational Program at San Antonio Dates Back to Franciscan Fathers," *Texas Outlook*, XXXVI (August, 1952), 9.

Traces the historical development of vocational education in San Antonio and tells how the program operates.

#### ADULT EDUCATION

679. BLAKELY, ROBERT J. "Threats to Books," *American Library Association Bulletin*, XLVI (October, 1952), 291–92.

Suggests that adult education is one of the best mediums for combating ideologies which are foreign to our democratic society.

680. "Challenge of Change' Concerns Adult Education Association," *Nation's Schools*, L (December, 1952), 98, 100.

Identifies and discusses some of the urgent problems in the field of adult education.

681. SPINNEY, ANN. "Bench Marks for Adult Education," *Higher Education*, IX (December 15, 1952), 89–90.

Lists fact-finding surveys which were undertaken to provide a basis for sound long-range plans and policies.

682. VEJTASA, FRANCES. "Learning as You Like It for Adults," *Nation's Schools*, LI (February, 1953), 62–64.

Tells about the Adult Education Center of San Jose, California, which operates on the premise that democracy is the most powerful force in the world.

#### SCHOOL AND COMMUNITY

683. BUSH, ROBERT N. "A New Education for a New Community," *California Journal of Secondary Education*, XXVIII (March, 1953), 122–24.

Discusses some of the educational problems confronting new communities.

684. DAVIS, WENDELL V. "Community and School Equip Cafeteria," *Nation's Schools*, L (July, 1952), 72, 73.

Shows how the co-operation between school and community pays dividends. Offers suggestions for co-operative projects.

685. FRENCH, WILL. "The Modern High School Serves America," *North Central Association Quarterly*, XXVII (October, 1952), 193–203.

Thought-provoking and forward-looking article tells how the modern school attempts to serve all its students and the community.

686. GILCHRIST, R. S. "How Successful Are Today's Secondary Schools?" *North Central Association Quarterly*, XXVII (October, 1952), 204–19.

Points out four considerations which are essential in an evaluation of today's secondary schools. Research tells us the following facts: (1) thoughtful, well-planned education benefits our country as well as our youth; (2) good education takes careful preparation; (3) certain traits are basic to an adequate education program; and (4) a school administrator has specific areas to emphasize if he is to be effective in his work.

687. GRACE, A. G. "Europe: Education for What?" *School Executive*, LXXII (December, 1952), 64-66.

A thoughtful article on the purposes of education.

688. JARMAN, ARTHUR M. "The Partnership Concept in School-Community Relations," *School Executive*, LXXII (November, 1952), 78-79.

Stresses the fact that parents and other community members must be made aware of educational problems and should be invited to participate in educational planning.

689. KVARACEUS, WILLIAM C. "What the Elmtowners Think of the Elmtown Study," *School Review*, LX (September, 1952), 352-57.

Describes a follow-up study to determine what townspeople thought of the study

made of the institutions and social conditions in a midwest city. Opinions were mixed, but generally unfavorable.

690. LYON, RUTH M. "One, Two, Three—Get Ready," *Instructor*, LXII (September, 1952), 66.

Discusses how to plan classes so as to stimulate interest in a multiple-grade school.

691. SMITH, MARY NEEL. "Making Parent Discussion Groups More Effective," *School Review*, LX (September, 1952), 331-37.

Describes procedures used to encourage more parents of a group of children at the seventh-grade level to participate in a discussion group.

692. SUMPTION, M. R. "School and Community Relationships," *Review of Educational Research*, XXII (October, 1952), 317-28.

Divides the topic into eight subdivisions and discusses the practices, problems, or opinions under each which arise directly from school-community relations.

693. TYLER, R. W. "Next Steps in Improving Secondary Education," *School Review*, LX (December, 1952), 523-31.

A forward look at the evolving secondary school.

## ADMINISTRATION

### GENERAL<sup>2</sup>

694. BRAUN, CATHERINE H. "Attendance Officer: There's the Human Side," *Clearing House*, XXVII (November, 1952), 141-43.

Describes the attendance system used in Joliet, Illinois, showing how a job that could be impersonal can become warm and satisfying.

<sup>2</sup> See also Item 78 (Elzay) in the list of selected references appearing in the January, 1953, issue of the *Elementary School Journal*.

695. CAMPBELL, ROALD F. "Public Participation Can Be More Constructive," *Nation's Schools*, LI (February, 1953), 58-60.

Discusses some promising practices in the art of public participation in public education.

696. LEAMINSON, GEORGE. "The Community's Role in School Administration," *American School Board Journal*, CXXVI (March, 1953), 30-32.



Reports on a current experiment in human relations and reviews the factors which resulted in a decision to include as much of the community as possible in school affairs.

697. "School Enrolment Again Reaches New High," *California Journal of Secondary Education*, XXVII (October, 1952), 365-66.

Presents the enrolment trends in schools and colleges, which show vividly the problem education will have to contend with during the next several years.

698. TOY, HENRY, JR. "A Report on Our Public Schools," *School Executive*, LXXII (December, 1952), 50-51.

Reports on the activities of the National Citizens Commission for Public Schools.

#### DEMOCRATIC ADMINISTRATION

699. BARTKY, JOHN A. *Supervision as Human Relations*. Boston: D. C. Heath & Co., 1953. Pp. xii+308.

Deals with interpersonal relations in school situations and presents many illustrations of successful practice.

700. GOODWIN, JACK C. "How To Improve Principal-Teacher Relations," *School Executive*, LXXII (December, 1952), 48-49.

Discusses areas which might be strengthened by the alert principal who wishes to improve staff relations.

701. GREEN, ROBERTA. "The Obstacles to Democratic Administration as Seen by a Teacher," *Progressive Education*, XXX (November, 1952), 35-37.

Discusses some of the practical barriers to democratic administration.

702. JOHNS, R. L. "How Do You Rate as a Democratic Administrator?" *School Executive*, LXXII (November, 1952), 50-51.

Analyzes school administrators in terms of their ideals, goals, attitudes, methods of work, and relations with other individuals.

703. MOORE, HOLLIS A. "Blind Spots in In-service Education for Administrators," *Nation's Schools*, LI (April, 1953), 43-46.

Reports the current need for in-service help as superintendents see it.

704. ROUNDS, LESTER E. "Delegating Administrative Authority," *Nation's Schools*, L (October, 1952), 57-59.

Discusses a plan for delegating administrative responsibilities to teachers.

705. WEBER, C. A. "Leadership and Efficiency," *Educational Administration and Supervision*, XXXVIII (November, 1952), 435-40.

Presents eleven suggestions for administrators to follow to insure a more efficient school program.

#### PUPIL PERSONNEL

706. ADAMS, NICHOLAS A. "Guidance—Province of Every School Person," *Educational Leadership*, X (March, 1953), 370-74.

Describes a guidance program based on the assumption that guidance is the responsibility of every school person.

707. LAYTON, WARREN K. "Special Services for the Drop Out and the Potential Drop Out," *Bulletin of the National Association of Secondary-School Principals*, XXXVII (March, 1953), 72-76.

Identifies some of the factors causing students to drop out of school and lists ways of attacking the problem.

708. PETERS, JON S. "Guidance in Small Schools," *Nation's Schools*, L (July, 1952), 57.

Emphasizes the importance of guidance in a small school and cites the value of the incidental counseling which probably solves the majority of the student's problems.

709. SCOTT, WARREN B. "Student Personnel Research in the Southern Region, 1948

to 1951," *School and Society*, LXXVII (April 18, 1953), 247-49.

Reports on a survey that was undertaken to determine what is being done in student personnel research, the most necessary areas for future research, and the trends in organization of student personnel programs.

710. TRAPHAGEN, ARTHUR L. "Guidance Is a Co-operative Project," *California Journal of Secondary Education*, XXVIII (January, 1953), 57-59.

Points out the importance of co-operation in guidance and outlines some of the reasons which account for difficulty in achieving such co-operation.

711. VAN HALL, MILO. "The Guidance Advisory System," *Junior College Journal*, XXIII (January, 1953), 255-56.

Reports on the activities of the Guidance Advisory Committee operating in the state of New York, which aids school counselors and advisers in solving their problems.

#### DISCIPLINE

712. BROBERG, EDITH H. "Discipline in the Study Hall," *Clearing House*, XXVII (March, 1953), 408-11.

Suggests methods and techniques for making study halls operate successfully and efficiently.

713. CHRISTOPHE, LeROY M. "The Principal's Responsibilities for Developing and Maintaining Discipline in the High School," *Bulletin of the National Association of Secondary-School Principals*, XXXVII (February, 1953), 37-44.

Presents principles and concepts of discipline that are currently accepted and suggests methods for implementing such connections into school programs.

714. JENT, H. CLAY. "We Must Not Make It Seem Like Criticism," *Progressive Education*, XXX (April, 1953), 182-84.

Points out that teachers are sometimes confused in their understanding of basic democratic principles and privileges.

715. TONSOR, CHARLES A. "The Children You Won't Have in Your Room," *High Points in the Work of the High Schools of New York City*, XXXIV (November, 1952), 9-12.

Discusses characteristics of maladjusted children and suggests a program of action for aiding them to adjust.

716. TONSOR, CHARLES A. "Some Fundamentals of Discipline," *Bulletin of the National Association of Secondary-School Principals*, XXXVII (March, 1953), 146-47.

Contents that discipline acquaints youth with standards—certain fixed landmarks which produce a feeling of security.

#### FINANCING ACTIVITIES

717. HALBERSTADT, L. C. "School-Community Funds," *Nation's Schools*, LI (April, 1953), 98, 100.

Discusses the expanded obligations and responsibilities of the business office of the school in the field of extra-school financial activities.

718. SHANNON, J. R. "Then and Now in School Activities," *School Activities*, XXIV (March, 1953), 215-17.

Summarizes some malpractices in financial management of extra-curriculum activity funds.

719. THOMSON, PROCTER. "Economic Prospects and School Finance," *School Review*, LX (October and November, 1952), 397-403, 474-80.

Two articles on the relation of economics to education, which discuss the long-run factors and the short-run factor of inflation.

## PUBLIC RELATIONS

720. AMES, DORA A. "A Community Occupational Survey as a Public Relations Instrument," *School Review*, LXI (January, 1953), 30-33.

Describes a survey begun in May, 1950, in Toms River (New Jersey) High School. The purpose was to develop a basis for vocational curriculum revision—in effect it broadened into a full-scale curriculum revision. Understanding and good relations resulted between the school components and the entire community.

721. BARTKY, A. JOHN. "Reason, Propaganda, and Attacks upon the Schools," *Educational Administration and Supervision*, XXXIX (January, 1953), 1-13.

Contends that replies to public criticisms of the schools should be in terms of facts and not emotionalized, biased judgments.

722. BUTTERFIELD, E. E. "Examining Our Public Relations," *Bulletin of the National Association of Secondary-School Principals*, XXXVII (April, 1953), 357-62.

Examines the school's relations with four groups: the press, the parents, the parent-teachers' association, and the public.

723. FITZPATRICK, EDWARD A. "Public Education Is Public Business," *American School Board Journal*, CXXVI (April, 1953), 54-55.

Emphasizes the point that an active public opinion expressing itself is a sign of vitality.

724. STAPLETON, EDWARD GUY. "Put the Taxpayer in Your Corner," *School Executive*, LXXII (October, 1952), 70-73.

Presents the story of the public relations program in the public school system of Baltimore County, Maryland: the factors that make it necessary, the details of its working-out, and the results.

## STANDARDS AND ACCREDITATION

725. ECKHARDT, JOHN W. "Union High School District Appraises Itself," *California Journal of Secondary Education*, XXVIII (February, 1953), 90-93.

Describes the comparative application of the *Evaluative Criteria* in a self-evaluating program.

726. HUDSON, MARY-CATHERINE. "An Academic Standard for Each Kind of Student," *Clearing House*, XXVII (November, 1952), 149-52.

Suggests that students and subjects be classified according to college-entrance, vocational, and general groupings and that standards of achievement be established in terms of the needs and goals of each group.

## SIX-YEAR HIGH SCHOOL

727. LAPPIN, C. G. "How Can We Improve the Administration of Our Six-Year Schools?" *Bulletin of the National Association of Secondary-School Principals*, XXXVII (April, 1953), 200-201.

Discusses specific practices that have proved practical.

728. WHITE, STUART M. "How Can We Improve the Administration of Our Six-Year Schools?" *Bulletin of the National Association of Secondary-School Principals*, XXXVII (April, 1953), 197-200.

Points out that problems of administration in all types of schools are similar.

## EDUCATIONAL WRITINGS



### REVIEWS AND BOOK NOTES

A. M. JORDAN, *Measurement in Education: An Introduction*. New York 36: McGraw-Hill Book Co., Inc., 1953. Pp. xii+534. \$5.25.

Of all the procedures characteristic of present-day schools, probably no other varies so greatly from school to school as does measurement. At one extreme, a small proportion of schools administer from four to eight or more tests to each pupil annually, record the results cumulatively, and use the data in teaching and personnel work with individuals. At the other extreme, some schools use no measures of any kind except teacher-made, essay-type examinations. The schools forming the large in-between group give tests occasionally, but they do not carry on regular, systematic programs of measurement, and they are not well informed concerning the kinds and functions of measurement devices available to them. Jordan's book, *Measurement in Education*, seems well designed to help these schools choose tests more effectively and employ them with greater understanding.

The book consists of four parts. In the first three chapters of Part I, "Problems of Measurement," the measurement problems in guidance and education are presented and the characteristics and construction of measurement instruments are discussed. The rest of Part I consists of a series of ten chapters dealing in detail with achievement-test batteries and achievement tests in the different fields of study. Tests for both elementary and secondary schools are considered. This part accounts for approximately two-thirds of the book.

Part II consists of two chapters on the

measurement of intelligence. The Terman-Merrill Revision of the Stanford-Binet Scale, the Wechsler-Bellevue Intelligence Scale, and a large number of group tests of mental ability for all grade levels are discussed.

Part III, called "Personality Inventories," contains three chapters—one on the measurement of interests, one on the measurement of attitudes, and one on the measurement of personal qualities. Structured instruments rather than projective techniques are stressed.

Part IV is made up of one chapter on statistical methods which is one of the best chapters in the book. It presents simply and clearly the essentials of elementary statistics needed by teachers and guidance workers and, at the same time, avoids going into statistical concepts and procedures seldom used by schools.

In the Preface the author indicates that his book represents a combination of two approaches to the preparation of textbooks on measurement in education—one that develops logically the history and principles of testing, with no detailed study of particular tests, and one that describes tests in detail but gives little attention to principles. While a study of the book shows that this statement is correct, the greater emphasis seems to be on test description. More than half the book is concerned primarily with listings and descriptions of specific tests, together with critical comments.

The book is competently written, and the large fund of information supplied about specific tests seems to be accurate, with a few exceptions too minor to deserve mention.

This reviewer's general estimate of the

book is favorable, but certain limitations should be noted. The book seems to be written from the point of view of one who studies tests and testing procedures and teaches others about them rather than of one who is, through constant use, intimately acquainted with the strengths, limitations, and relative merits of tests. While the author presents a good deal of helpful criticism of the instruments discussed, there is a tendency in a considerable number of instances to accept uncritically the reliability and validity data reported by the publisher of the test instead of taking into consideration the other available research data.

Moreover, some of the material in the book is not so recent as the copyright date would lead one to expect. Certain tests that have been out of print for some time are presented as though current. Examples are the Cooperative Literary Acquaintance Test, the Cooperative Economics Test, the American Council Civics and Government Test, the Gates-Strang Health Knowledge Test, and various Thurstone Attitude Scales. At the same time, no discussion is given of some of the most promising tests recently published. These include such tests as the Evaluation and Adjustment Series of the World Book Company, which promises to be a fairly active competitor of the Cooperative Achievement Tests so extensively discussed in Jordan's book; the Diagnostic Reading Tests published by the Committee on Diagnostic Reading Tests; the Iowa Tests of Educational Development; and a good many others.

The worth of the book may also be limited to some degree by the fact that a rather small amount of attention is given to an aspect of measurement with which nearly all schools greatly need assistance—the *organization and use* of the test results.

Notwithstanding these reservations, the book should enjoy wide use. Whether it should be recommended as a textbook in preference to other books on educational measurement probably depends upon cir-

cumstances. If a comprehensive, up-to-date file of tests is available to the class, a textbook stressing principles of test development, administration, and use might be preferable. This book, with its emphasis on specific measurement instruments combined with some attention to theory, seems particularly suited for use in institutions that do not have an adequate test file and under conditions where it is not feasible to ask the students to purchase specimen sets of tests. Likewise, many elementary and secondary schools will find Jordan's book a helpful reference work for teachers and counselors.

ARTHUR E. TRAXLER

*Educational Records Bureau*  
New York City

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LAURENCE S. FLAUM, *The Activity High School: The Principles of Its Operation*. New York 16: Harper & Bros., 1953. Pp. viii+418. \$4.50.

Teachers and administrators who are looking for practical suggestions on how to reconstruct the program of the secondary school should read *The Activity High School*. Just what are the causes for the lag between what is known and what is done about education for American youth? Some would place the blame with the colleges, which, they say, would not accept the graduates of these new schools. To others, the recent attacks on public education are an indication that now is not the time to experiment with new programs. Although a few schools have pioneered in the development of a curriculum to meet the needs of youth, the great mass of secondary schools have not followed their lead. The success of the Eight-Year Study in showing that college preparation is more dependent upon the quality of work done than upon the pattern of courses taken in high school is somehow ignored. The Educational Policies Commission report on *Education for All American Youth*, with its many sugges-

tions for the modern secondary-school program, has had only a moderate effect on the high-school curriculum.

Even though school faculties are being organized in increasing numbers to study the curriculum, the high school, with but few exceptions, remains relatively unchanged. Perhaps in all these efforts too little attention has been given to the tremendously creative task which teachers must perform to bring such a program into reality. In this book Flaum does not overlook such a possibility, which is based on the assumption that curriculum change results from changes that take place in teachers and administrators. These changes are, first, in point of view. They result from intensive study of the problems and needs of the youth as they grow up to understand our culture and how it impinges on their lives. To them the high school becomes an agency for the induction of youth into the responsibilities of democratic living.

*The Activity High School* is not a prescription to be followed by those who would build such a program for youth. Rather, it is intended to serve administrators, teachers, parents, laymen, and others as a "direction finder in the scope and practice of our high schools" (p. 17). In his attempt to achieve this goal, the author has taken great pains to show what youth are like and how the program must be adapted to their development in preference to molding them into preconceived patterns.

The laboratory approach to teaching is especially well described and illustrated. Certainly, few teachers could fail to find worthwhile suggestions in the author's analysis of this method and the purposes to be served by it. The major portion of the book is devoted to principles of action, suggested activities, illustrations of the laboratory approach method, kinds of resources to be used, and procedures that might be helpful in evaluation. This is done for all areas of the school program.

The latter portion of the book deals with

the over-all structure of the high school—how the various parts of the curriculum fit together. It is an attempt to integrate class activity, the extra-class program, guidance, and evaluation. Certainly these should be combined in a unified program of action with one common goal. Actual daily schedules are shown to suggest ways in which such a program could function in a modern school. Extra-class activities appropriate to such a program are listed. The student council is given a place of prominence in the school. Seminar guidance activities are proposed. Competitive activities are given no place in the program, but recreational and social experiences are thought to contribute greatly to the purposes to be achieved.

From the discussion of guidance principles and practice, the reader could get the impression that guidance and teaching are separate functions. While it is true that certain guidance services must be performed by those having special preparation for them, the bulk of the guidance which a student receives in school still comes from the teacher. The author undoubtedly intends to convey this meaning, for he says: "In order to organize a guidance program which will realize the varied needs of our students, the whole environment must become one in which creative individual development can take place" (p. 341).

Helping the student to learn to understand himself and his growth is the major objective of the evaluation program proposed. The concept that learning is behavior change is emphasized throughout this discussion. The reader would do well to study the author's proposals for evaluations by teacher, individual, and groups and the suggestions which he makes for reporting practices.

The direction-finding concept built around the many principles of operation that are offered for the consideration of teachers is the outstanding contribution of this book to professional literature. This is achieved best in that portion of the book in which the author develops the laboratory approach to



instruction. The latter portion, which deals with structure, tends to be somewhat more prescriptive, and, although highly suggestive, is less replete with principles that might serve as "finders."

JOHN A. RAMSEYER

Ohio State University



*A Television Policy for Education.* Proceedings of the Television Programs Institute Held under the Auspices of the American Council on Education at Pennsylvania State College, April 21-24, 1952. Edited by CARROLL V. NEWSOM. Washington 6: American Council on Education, 1952. Pp. xx+266. \$3.50.

In midspring, 1952, a four-day conference on the future of educational television was held on the campus of Pennsylvania State College. Under the sponsorship of the American Council on Education, there was gathered together a selected group of participants with diverse backgrounds but a common interest: "to gain greater understanding of the role of television, both through educational and commercial channels, in the total educational process." The book under review is a report of the proceedings of the conference.

Television has come upon the national scene so suddenly and has grown to enormous size so fast that no one mind can grasp its present impact or its future significance. A symposium of views such as the one here presented is the only possible method of approach. Despite the title of the volume, the conference did not work out a television policy for education (it could not have done so!) but it did take the necessary first steps toward the formulation of that policy. It provided a place at which college presidents, leaders of the communications industry, high government officials, and specialists in educational and commercial television could meet and talk with one another.

The results were inevitably bound to be more rewarding to the participants than to anyone else, but the editor, Carroll V. Newsom, has tried to preserve as many values as possible for those who must be content with reading. He has selected, arranged, compressed, and focused a very broad range of materials and has brought about as much order as was possible in view of the variety of approaches used and the differences of the viewpoints expressed.

Television is progressing (or, at least, changing!) at so rapid a rate that this volume was already slightly out of date before it was even published. A similar fate awaits any other book written on the same subject. For the time being, however, anyone who wishes to gain a broad comprehension of educational television cannot do better than to start by reading *A Television Policy for Education*.

CYRIL O. HOULE

University of Chicago



KIMBALL WILES, *Teaching for Better Schools*. New York 11: Prentice-Hall, Inc., 1952. Pp. xiv+398. \$4.00.

The growing emphasis on teacher-pupil planning has aroused widespread interest in the role of the teacher. Groups of teachers everywhere are asking themselves how to bring into some harmony the new concepts about the co-operative nature of the learning process and their own picture of themselves in their classrooms. Future teachers are exploring the same kind of question in most colleges of education.

For professional persons concerned with this dilemma, *Teaching for Better Schools* can make a significant contribution. It offers practical help on how we can see our role as teachers devoted to co-operative planning in the classroom. The author recognizes the imperfections of our understanding and skill, and he leads us gradually and with respect for our personality. Yet he never loses sight

of the goals which all of us must seek if we would work co-operatively with children and youth.

The book begins with two excellent exploratory chapters on the teaching-learning situation and the teacher's role. Following these there are sections titled "Teaching Is Skill in Human Relations" (two chapters); "Teaching Is Skill in Group Work" (four chapters); "Teaching Is Skill in Evaluation" (two chapters); "Teaching Is Skill in Individualizing Instruction" (two chapters); "Teaching Is Skill in Cooperation" and "Teaching Is Skill in Self-improvement" (one chapter each).

The entire volume is oriented clearly and sharply toward the important question of how a teacher can effectively use group activities and other related co-operative procedures, and work with, rather than against, the natural learning drives of boys and girls. Nearly every chapter closes with a device used by Wiles in an earlier book: a listing of the techniques and concepts with which the chapter has been concerned. There is a wealth of actual anecdotal illustrations drawn from the classroom. In addition to these anecdotes, there is frequent use of illustrations in the theoretical sections of each chapter. Pages are frequently warmed by matchstick cartoons, many of them cleverly contrived to emphasize a technique or an issue.

The book is written simply and clearly

and is unusually free from the "pedagoga" which is the curse of much professional writing in education. There are many passages which would tempt one to quote them if space permitted; the author has the knack of getting quickly into the heart of an issue and making it clear—an approach which helps equally to make the solution appear inevitable and logical.

An interesting section in the Appendix is titled "Significant Research." In this section are seventeen pages of well-chosen, compact listings of pertinent research, with a paragraph abstract of the technique used and the results. The reader is left to make his own connection between this useful material and the text. It is possible that not many readers will discover or use these examples of "Significant Research." The section is preceded by a useful listing of books, pamphlets, and magazine articles which relate, for the most part, to the techniques associated with group planning and human relations in the classroom.

*Teaching for Better Schools* is an excellent book which has already proved a rich resource in this reviewer's graduate classes. Most in-service teachers identify readily with the book and seek to know more about the concepts and practices which it introduces to them. No greater tribute can be paid to professional writing.

ROLAND C. FAUNCE

Wayne University



### CURRENT PUBLICATIONS RECEIVED

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| <p>METHOD, HISTORY, THEORY,<br/>AND PRACTICE</p> <p>ADAMS, HAROLD P., and DICKEY, FRANK G. <i>Basic Principles of Supervision</i>. New York 16: American Book Co., 1953. Pp. xiv+320. \$3.75.</p> <p><i>The American Elementary School</i>. Edited by HAROLD G. SHANE. Thirteenth Yearbook of the John Dewey Society. New York</p> | <p>16: Harper &amp; Bros., 1953. Pp. xii+434. \$5.00.</p> <p>ANDERSON, VIRGIL A. <i>Improving the Child's Speech</i>. New York 11: Oxford University Press, 1953. Pp. xvi+334. \$4.00.</p> <p>BEAN, KENNETH L. <i>Construction of Educational and Personnel Tests</i>. New York 36: McGraw-Hill Book Co., Inc., 1953. Pp. viii+232. \$4.50.</p> |
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- Building the Integrated Curriculum. The Proceedings of the Workshop of Integration in the Catholic Secondary School Curriculum, Conducted at the Catholic University of America from June 13 to June 24, 1952.* Edited by SISTER MARY JANET MILLER. Washington 17: Catholic University of America Press, 1953. Pp. vi+172. \$2.50 (cloth), \$1.75 (paper).
- CRAIG, ROBERT C. *The Transfer Value of Guided Learning.* Teachers College Studies in Education. New York: Bureau of Publications, Teachers College, Columbia University, 1953. Pp. viii+86. \$2.75.
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- EDMONSON, J. B.; ROEMER, JOSEPH; and BACON, FRANCIS L. *The Administration of the Modern Secondary School.* New York 11: Macmillan Co., 1953 (fourth edition). Pp. xviii+614. \$5.00.
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- Principles and Procedures of Teacher Selection.* Philadelphia 3: American Association of Examiners and Administrators of Educational Personnel, 1952 (second edition). Pp. viii+146. \$5.00.
- Private Independent Schools: The American Private Schools for Boys and Girls.* A directory and guide for parents and teachers. Boarding schools, day schools, and

- junior colleges, with or without church affiliations and operating for the most part as educational corporations under state charters. Wallingford, Connecticut: James E. Bunting, 1953 (sixth edition). Pp. viii+688. \$5.00.
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- Functional Mathematics: Book 1*, by WILLIAM A. GAGER, MILDRED H. MAHOOD, CARL N. SHUSTER, and FRANKLIN W. KOKOMOOR, pp. xiv+434, \$2.96; *Book 2*, by WILLIAM A. GAGER, CHARLOTTE CARLTON, CARL N. SHUSTER, and FRANKLIN W. KOKOMOOR, pp. xvi+448, \$2.96. New York 17: Charles Scribner's Sons, 1953.
- ORR, ETHEL M.; HOLSTON, EVELYN T.; and CENTER, STELLA S. *Reading Today Series: Exploring Literature Old and New*. New York 17: Charles Scribner's Sons, 1953 (revised). Pp. xviii+654. \$3.00.
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BEVANS, LLOYD. *The Elementary School Principalship in California.* Bulletin of the California State Department of Education, Vol. XXII, No. 5. Sacramento, California: State Department of Education, 1953. Pp. vi+48.

*Children's Books for Eighty-five Cents or Less.* Prepared by ELIZABETH H. GROSS. Bulletin No. 36. Washington 5: Association for Childhood Education International, 1953. Pp. 46. \$0.50.

CONGER, LOUIS H., JR. "Survey of New Personnel in Upstate New York Public Schools, 1952-53." Albany, New York: State Education Department, 1953. Pp. 28 (processed).

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of Education, University of Illinois, 1953. Pp. 72.

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